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Chopp et al. Society for neuroscience 1999, Vol.25 Abstract no. 528.2

527.13

**DIFFERENTIAL EXPRESSION OF GAP JUNCTION PROTEINS IN DEVELOPING AND ADULT MOTOR NEURONS.** Q. Chang* & R. J. Balice-Gordon. Department of Neuroscience, University of Pennsylvania School of Medicine, Philadelphia, PA 19104.

We are studying gap junctional coupling among spinal motor neurons to understand the roles of inter-cellular communication in neural development. We previously reported that motor neurons are electrically and dye coupled around the time of birth, and that this gradually disappears during the first postnatal week. RT-PCR from purified motor neurons, *in situ* hybridization and immunostaining in tissue sections show that during embryonic and neonatal development, motor neurons and other cells in the spinal cord and dorsal root ganglia express a combination of five connexins, including Cx36, Cx37, Cx40, Cx43 and Cx45. Among these connexins, Cx40 is rapidly down-regulated during the first postnatal week, and Cx45 is gradually down-regulated during the first two postnatal weeks. In contrast, expression of Cx36, Cx37 and Cx43 is maintained in most motor neurons during postnatal development. As a result, Cx40 is expressed in less than 10% of adult motor neurons; Cx45 is expressed in ca. 50% of adult motor neurons; and Cx36, Cx37 and Cx43 are expressed in over 95% of adult motor neurons. Thus, despite the transient gap junctional coupling observed in the perinatal period, many motor neurons express more than one connexin through adulthood.

Preliminary analysis of Cx40-/- mice (obtained from Dr. D. L. Paul) shows that while the number of motor neurons and muscle fibers appears normal, the time course of synapse elimination at neuromuscular junctions is shifted several days earlier compared to wild type mice. We are currently evaluating the extent of electrical and dye coupling among motor neurons in Cx40-/- mice, and are examining whether motor neuron development, muscle fiber development and/or synaptic connectivity are altered in Cx40-/- and other connexin knock out mice.

Supported by grants from the NIH (NS34373) and the Spinal Cord Research Foundation (1472).

## TRANSPLANTATION II

528.1

IMMUNOGENICITY OF ACELLULAR NERVE TRANSPLANTS AFTER PRETREATMENT WITH CULTURED SCHWANN CELL MEDIUM. A. Gulati*, J. McCoy and G. Oblak. Dept. of Cellular Biology and Anatomy, Medical College of Georgia, Augusta, GA 30912

Earlier work has demonstrated that coculture of acellular nerve transplants with Schwann cells (SC) enhances their regenerative potential. Furthermore, the results showed that allogeneic SC migrate into acellular nerves after coculture and render such grafts immunogenic, that under rejection (Gulati, Transplantation, 59:1618-1622, 1995). The present study employed a two-chamber culture system for pretreatment of acellular nerves with SC conditioned medium in an attempt to prevent their migration into the nerve transplants. Inbred stains of Fischer (FR) and Buffalo (BF) rats were used to established strain specific SC cultures. FR acellular nerves were placed in the upper chamber and cocultured with FR and BF SC for 7 days and then transplanted into FR and BF host rats. Grafts were morphologically analyzed at 1,2,4 and 8 weeks after transplantation. FR nerves cocultured with FR SC did not exhibit any immunogenicity and supported regeneration through them at 8 weeks. No regeneration was observed when such grafts were transplanted into BF hosts, and a minor immune response especially in the region of perineurium was seen. The regenerative ability of acellular grafts treated with SC culture medium alone was not as good as compared to earlier SC coculture studies. These results show that pretreatment with SC conditioned medium does not alter allograft immunogenicity and can enhance regeneration through acellular nerve transplants, however presence of SC results in optimal regeneration (Supported by BRSG from MCG).

528.2

**ADULT BONE MARROW TRANSPLANTATION FOR TREATMENT OF STROKE IN ADULT MICE.** M. Chopp,[1,3]* Y. Li,[1] J. Chen,[1] L. Wang,[1] L. Zhang,[1] S.C. Gautam,[2] D. Deu,[1] Y. Xu,[2] and C. Powers[1]. [1]Dept. of Neurology, [2]Division of Hematology/Oncology, Henry Ford Health Sciences Center, Detroit, MI 48202; [3]Dept. of Physics, Oakland Univ., Rochester, MI 48309.

We tested the hypothesis that after stroke intracerebrally transplanted bone marrow (BM) cells differentiate into parenchmal cells. Adult mice (n=29) were subjected to embolic MCAo and transplanted with naive complete BM, cultured hematopoietic or mesenchymal stem and progenitor cells (HSCs or MSCs infused with nerve growth factor) into the ischemic striatum at 4 d after MCAo. Donor cells were harvested from mice injected with bromodeoxyuridine (BrdU). Mice were sacrificed at 4 d ~14 d after MCAo. Control mice (n=25) were divided into three groups: 1) MCAo alone; 2) donor cells transplanted into the normal striatum without MCAo; and 3) donor cells killed by freeze-thawing transplanted into the ischemic striatum. Cell type specific markers were employed by immunohistochemistry to identify phenotypic fate of donor cells and ischemic damaged brain tissue. Our data indicate that donor cell survival and mitosis were morphologically detectable in the ischemic striatum until 2 weeks (the end point) using markers, BrdU, CD34, PCNA and nestin. Scattered BM cells, HSCs, and MSCs expressed the phenotype neuronal (MAP-2, NeuN, NeuroD, TH, GABA) or astrocytic (GFAP). Cells derived from neural stem cells in the ventricular and subventricular zone (VZ/SVZ) adjacent to the territory of MCAo rapidly proliferated and expressed PCNA, nestin, NeuroD, NeuN, MAP-2 and GFAP. Clusters cells from VZ/SVZ migrated and were recruited to the ischemic striatum. The grafting microenvironment (stroma humoral) increased regulatory activity of the ischemic brain, in that migration patterns of VZ/SVZ cells were more prominent in mice transplanted with naive complete BM than with cultured HSCs and MSCs. Our findings suggest that both exo- and endogenous stem cells express neuronal and glial phenotypes after MCAo with BM transplantation. BM may provide a new avenue to induce plasticity in injured brain.

Sources of support: NIH grants PO1 NS23393, RO1 NS33627 and RO1 NS35504.

528.3

THE CELLULAR AND PHYSIOLOGICAL CORRELATES OF NEUROEPITHELIAL STEM CELL DIFFERENTIATION IN HIPPOCAMPAL SLICE PREPARATION R.H.Suhr, S.J.Wilkinson, K.L.Mellodew, E.Samestky, G.Dawe, J.D.Stephenson, J.Price*. ReNeuron Ltd, Institute of Psychiatry, Denmark Hill, London SE5 8AF.

The aim of this research was to investigate in organotypic hippocampal slices the neuronal differentiation processes underlying recovery of cognitive function produced by transplanting MHP36 cells, a conditionally immortal, neuroepithelial stem cell line, into ischemic rat brain in vivo. MHP36 cells were derived from embryonic hippocampus of a transgenic mouse that carries a temperature sensitive allele SV40 large T antigen oncogene. When transplanted in vivo, the cells recently have been shown to repopulate the ischemic tissue and restore lesion-induced cognitive deficits. (Sinden et al., 1997, Neuroscience 81: 599-608).

In initial experiments, hippocampal slices were obtained from 6 day old rats and cultured under serum-free conditions for up to 4 days before applying MHP36 cells. The cells migrated into the slices and integrated into the hippocampal structure. Over the ensuing 14 days in vitro, they began to loose their stem cell properties, as indicated by down regulating the nestin-expression. At this early time point, however, the cells neither expressed neuronal markers nor showed spike discharges following depolarisation.

These data indicate that MHP36 cells can integrate into hippocampal tissue in vitro and begin the process of differentiation. This model allows us now to pursue the cellular and physiological correlates of the differentiation process.

Supported by ReNeuron Ltd

528.4

ENGRAFTMENT OF IMPLANTED NEUROEPITHELIAL STEM CELLS IS DEPENDENT ON THE MAGNITUDE OF ISCHEMIC DAMAGE AND ANATOMICAL ORIGIN OF THE GRAFTED CELLS. S. Patel*, A. Mora, K. McNally, T Rashid, P. Sowinski, W. Watson, G. Dawe and J. Sinden. ReNeuron Ltd, Institute of Psychiatry, De Crespigny Park, Denmark Hill, London, SE5 8AF, UK.

Transplantation of neuroepithelial stem cells has been consistently shown to restore functional defects produced by ischemic damage. This study examined whether the extent of engraftment is dependent on the magnitude of neuronal cell loss, on the anatomical origin of the graft material, or on the anatomical position of the damage. A conditionally immortalized hippocampal neuroepithelial cell line (MHP36), and striatal and cortical conditionally immortalised cell populations (all derived from E14 mice) were transplanted into rats following transient global cerebral ischemia. A 15 min four-vessel occlusion (4VO) led to almost complete loss of pyramidal cells within the CA1 field, with varying degrees of damage within the striatum and frontal cortex. Following 30 min occlusion, cell loss was more dramatic also encompassing CA3 and occasionally the dentate gyrus while damage to the striatum and frontal cortex was more consistent and extensive. MHP36 cells transplanted into deeper layers of the cortex, above the dorsal hippocampus, migrated into CA1 as early as 1 week, with no further increase in numbers after 4 and 8 week survival periods. In addition, in the 30 min ischemia group, transplanted cells were also seen in CA3, and to a lesser extent in the striatum and frontal cortex, reflecting the neuronal cell loss in these regions. E14 cells derived from the striatum were also able to migrate to the CA1 but to a lesser extent than to the striatum in the 4VO model whereas E14 cortical cells had a tendency to migrate to all anatomical regions, with a preference towards the frontal cortex. Thus, extent of engraftment and migration is dependent on both the magnitude of damage and the anatomical region from which the graft tissue is derived.

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NEWS 29 Mar 24 Additional information for trade-named substances without structures available in REGISTRY
NEWS 30 Apr 11 Display formats in DGENE enhanced
NEWS 31 Apr 14 MEDLINE Reload
NEWS 32 Apr 17 Polymer searching in REGISTRY enhanced
NEWS 33 Apr 21 Indexing from 1947 to 1956 being added to records in CA/CAPLUS
NEWS 34 Apr 21 New current-awareness alert (SDI) frequency in WPIDS/WPINDEX/WPIX
NEWS 35 Apr 28 RDISCLOSURE now available on STN
NEWS 36 May 05 Pharmacokinetic information and systematic chemical names added to PHAR
NEWS 37 May 15 MEDLINE file segment of TOXCENTER reloaded
NEWS 38 May 15 Supporter information for ENCOMPPAT and ENCOMPLIT updated
NEWS 39 May 16 CHEMREACT will be removed from STN
NEWS 40 May 19 Simultaneous left and right truncation added to WSCA
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L2 105 DUP REM L1 (15 DUPLICATES REMOVED)

=> d bib abs

L2 ANSWER 1 OF 105 CAPLUS COPYRIGHT 2003 ACS
AN 2003:261099 CAPLUS
DN 138:271688
TI Preparation of heteroaryl benzyl sulfones as antiinflammatories.
IN Brands, Michael; Gruetzmann, R. Rudi; Kalthof, Bernd; Keldenich, Jorg; Lang, Dieter; Mueller, Ullrich; Pernerstorfer, Josef; Raabe, Martin; Rank, Elisabeth; Schirok, Hartmut; Schmeck, Carsten; Schuhmacher, Joachim; Stelte, Ludwig Beatrix; Urbahns, Klaus; Zaiss, Siegfried
PA Bayer Aktiengesellschaft, Germany
SO Brit. UK Pat. Appl., 140 pp.
CODEN: BAXXDU
DT Patent
LA English
FAN.CNT 2

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI GB 2380190 | A1 | 20030402 | GB 2001-20818 | 20010828 |
| GB 2379218 | A1 | 20030305 | GB 2001-23437 | 20010928 |

PRAI GB 2001-20818 A 20010828
OS MARPAT 138:271688
GI

/ Structure 1 in file .gra /

AB Title compds. [I; A = H, OH, cyano, alkanoyl, alkoxycarbonyl, amino, alkyl, aryloxy, heterocyclyl, etc.; m = 0-3; Q = thiadiazolyl, oxadiazolyl, pyrimidinyl, triazinyl; D = (substituted) alkanediyl; E = CH:CH, CH:N, N:CH; G = CONR2C6H3R3R4, NR2COR5; R2 = H, alkyl; R1, R3, R4 = H, halo, OH, NO2, CF3, OCF3, CH2OH, alkoxy, alkoxycarbonyl, aryloxy, alkyl; R5 = (substituted) aryl, heteroaryl, cycloalkyl, alkyl], were prepd. Thus, 3-mercapto-1,3,4-thiadiazole and 4-chloromethyl-N-(4-fluorophenyl)benzamide (prepn. given) were stirred 4 h in CH2Cl2 to give 73% thiadiazolyl benzyl sulfide intermediate. This was stirred overnight with 3-ClC6H4CO(OOH) to give N-(4-fluorophenyl)-4-[[(1,3,4-thiadiazol-3-yl)sulfonyl]methyl]benzamide. I inhibited IL-8 with IC50 = 50-200 nM.
RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs 2

L2 ANSWER 2 OF 105 CAPLUS COPYRIGHT 2003 ACS
AN 2003:174548 CAPLUS
DN 138:221587
TI Preparation of azinyl- and azolylsulfones as chemokine IL-8 receptor binding inhibitors.
IN Brands, Michael; Gruetzmann, Rudi; Kalthof, Bernd; Keldenich, Jorg; Lang, Dieter; Mueller, Ullrich; Pernerstorfer, Josef; Raabe, Martin; Rank, Elisabeth; Schirok, Hartmut; Schmeck, Carsten; Schuhmacher, Joachim; Stelte, Ludwig Beatrix; Urbahns, Klaus; Zaiss, Siegfried
PA Bayer Ag, Germany
SO Brit. UK Pat. Appl., 138 pp.
CODEN: BAXXDU
DT Patent
LA English
FAN.CNT 2

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI GB 2379218 | A1 | 20030305 | GB 2001-23437 | 20010928 |
| GB 2380190 | A1 | 20030402 | GB 2001-20818 | 20010828 |

PRAI GB 2001-20818 A 20010828
OS MARPAT 138:221587
GI

/ Structure 2 in file .gra /

AB Title compds. [I; Q = C-bound heterocyclyl; A = benzodioxanyl, benzodioxolyl, difluorobenzodioxolyl, tetrafluorobenzodioxanyl, H, OH, cyano, alkanoyl, alkoxycarbonyl, alkyl, alkoxy, etc.; D = (substituted) alkanediyl; E = CH:CH, CH:N; G = phenylaminocarbonyl, aroylamino; R1 = H, halo, OH, NO2, CF3, OCF3, hydroxymethyl alkoxy, alkoxycarbonyl, aryloxy, alkyl; m = 0-3], were prepd. Thus, 3-mercapto-1,3,4-thiadiazole, 4-chloromethyl-N-(4-fluorophenyl)benzamide, and Et3N were stirred together for 4 h in CH2Cl2 to give 73% sulfide coupling product, which was stirred with 3-ClC6H4CO(OOH) in DMF for 4 h to give 75% N-(4-fluorophenyl)-4-[[(1,3,4-thiadiazol-3-yl)sulfonyl]methyl]benzamide. I inhibited IL-8 receptor binding with IC50 = 40-470 nM.

=> d bib abs 3

L2 ANSWER 3 OF 105 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2003:201628 BIOSIS
DN PREV200300201628
TI Characterization of prominin-2, a new member of the prominin family of pentaspan membrane glycoproteins.
AU Fargeas, Christine A.; Florek, Mareike; Huttner, Wieland B. (1); Corbeil, Denis (1)
CS (1) Max-Planck-Institute of Molecular Cell Biology and Genetics, Pfotenhauerstrasse 108, D-01307, Dresden, Germany. HUTTNER@mpi-cbg.de, CORBEIL@mpi-cbg.de Germany
SO Journal of Biological Chemistry, (March 7 2003) Vol. 278, No. 10, pp. 8586-8596. print.
ISSN: 0021-9258.
DT Article
LA English
AB Prominin/CD133 is a 115/120-kDa integral membrane glycoprotein specifically associated with plasma membrane protrusions in epithelial and non-epithelial cells including neuroepithelial and ***hematopoietic*** ***stem*** ***cells*** . Here we report the identification as well as molecular and cell biological characterization of mouse, rat, and human prominin-2, a 112-kDa glycoprotein structurally related to prominin (referred to as prominin-1). Although the amino acid identity between prominin-2 and prominin-1 is low (<30%), their genomic organization is strikingly similar, suggesting an early gene duplication event. Like prominin-1, prominin-2 exhibits a characteristic membrane topology with five transmembrane segments and two large glycosylated extracellular loops. Upon its ectopic expression in Chinese hamster ovary cells as a green fluorescent protein fusion chimera, prominin-2 was also found to be associated with plasma membrane protrusions, as revealed by its co-localization with prominin-1, suggesting a related role. Consistent, with this, prominin-2 shows a similar tissue distribution to prominin-1, being highly expressed in the adult kidney and detected all along the digestive tract as well as in various other epithelial tissues. However, in contrast to prominin-1, prominin-2 was not detected in the eye, which perhaps explains why a loss-of function mutation in the human prominin-1 gene causes retinal degeneration but no other obvious pathological signs. Finally, we present evidence for the existence of a family of pentaspan membrane proteins, the prominins, which are conserved in evolution.

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2 FILES SEARCHED...
L3 30 L1 AND PY<=1999

=> d bib abs 1-
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L3 ANSWER 1 OF 30 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1997:218268 BIOSIS
DN PREV199799524772
TI Trends in transplantation in France.
AU Houssin, Didier
CS Cent. Hosp. Natl. Ophtalmol. Quinze-Vingts, 28 rue de Charenton, 75571 Paris Cedex 12 France
SO M-S (Medecine Sciences), (1997) Vol. 13, No. 3, pp. 364-365.
ISSN: 0767-0974.
DT Journal; Article
LA French

L3 ANSWER 2 OF 30 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1996:441598 BIOSIS
DN PREV199699163954
TI Gene therapy of adrenoleukodystrophy.
AU Cartier, N. (1); Niclea, J. M.; Chomienne, C.; Bougneres, P. F. (1); Aubourg, P. (1)
CS (1) Serv. d'Endocrinol. Inserm Unite 342, Hop. St.-Vincent-de-Paul, Ave. Denfert-Rochereau, 75014 Paris France
SO Archives de Pediatrie, (1996) Vol. 3, No. SUPPL. 1, pp. 77S-81S.
Meeting Info.: Thirty-first Congress of the Association des Pediatres de Langue Francaise (Association of French Language Pediatricians) Paris, France May 1-4, 1996
ISSN: 0929-693X.
DT Conference
LA French

L3 ANSWER 3 OF 30 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1996:424372 BIOSIS
DN PREV199699155428
TI Intensified chemotherapy with ***hematopoietic*** ***stem*** - ***cell*** support in solid malignancies of childhood: Present status and prospects.
AU Sommelet, D.
CS Serv. Med. Unfantile II, Hopital Enfants, CHU Nancy, rue du Morvan, 54511 Vandoeuvre-les-Nancy France
SO Archives de Pediatrie, (1996) Vol. 3, No. 7, pp. 643-648.
ISSN: 0929-693X.
DT Editorial
LA French

L3 ANSWER 4 OF 30 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1996:327640 BIOSIS
DN PREV199699049996
TI Role of p53 and RB on in vitro growth of normal umbilical cord blood cells.
AU Mahdi, Tarek (1); Alcalay, Dominique; Brizard, Andre; Bois, Monique; Millet, Christine; Kitzis, Alain; Tanzer, Joseph
CS (1) Cent. Transfusion Sanguine/Lab. Genet. Cell. Mol., CHU Poitiers, BP 577, 86021 Poitiers France
SO Experimental Hematology (Charlottesville), (1996) Vol. 24, No. 6, pp. 702-712.
ISSN: 0301-472X.
DT Article
LA English
AB Human umbilical cord blood (UCB) is rich in ***hematopoietic*** ***stem*** ***cells*** and progenitors and recently has been used in the clinic as an alternative source for graft and marrow repopulation. We tried to determine in vitro the roles of wild-type (wt) p53 and wt RB tumor/growth suppressor genes in the regulation of proliferation and maturation of hematopoietic UCB cells. CD34+ cells, isolated from mononuclear cells of UCB, were cultured in semisolid medium under conditions that favor growth of hematopoietic cells. We studied the level of expression of p53 and RB mRNAs and proteins during cell culture by Northern blot and cytofluorometry analysis, respectively. Sense (S), antisense (AS), or scrambled (missense (MS)) p53 and RB oligodeoxynucleotides (ODNs) were used to study the behavior of these cells in the absence of expression of p53 and/or RB. Adequate doses of p53 or RB ODNs inducing maximal inhibitory effect with minimal cellular toxicity were determined. Exposure of CD34+ cells to p53 AS, RB AS, or both p53 and RB AS but not other ODNs (sense or missense) resulted in a significantly increased number of colony-forming units-granulocyte/macrophage (CFU-GM) induced by interleukin-3 (IL-3) and/or granulocyte-macrophage colony-stimulating factor (GM-CSF). The number of erythroid colonies (CFU-E) and burst-forming units (BFU-E) derived from CD34+ cells in the presence of erythropoietin (Epo) was not significantly increased, whereas the number of such colonies was markedly increased in the presence of IL-3 + Epo upon p53 AS and/or RB AS treatment. These results are consistent with the hypothesis that wt p53 and RB are proliferation suppressor genes that interfere with normal maturation of hematopoietic cells.

L3 ANSWER 5 OF 30 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1996:202545 BIOSIS
DN PREV199698758674
TI Systemic expression of rat arrestins/S-Ag by retroviral gene transfer into ***hematopoietic*** ***stem*** ***cells*** for studies of immune tolerance.
AU Cameron, J. D.; McPherson, S. W.; Roberts, J. P.; Gregerson, D. S.
CS John E. Harris Ophthalmol. Res. Lab., Dep. Ophthalmol., Univ. Minn., Minneapolis, MN USA
SO Investigative Ophthalmology & Visual Science, (1996) Vol. 37, No. 3, pp. S540.
Meeting Info.: 1996 Annual Meeting of the Association for Research in Vision and Ophthalmology Fort Lauderdale, Florida, USA April 21-26, 1996
ISSN: 0146-0404.
DT Conference
LA English

L3 ANSWER 6 OF 30 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1995:528491 BIOSIS
DN PREV199598542791
TI Comparison of anxiety, pain and discomfort in two procedures of ***hematopoietic*** ***stem*** ***cell*** collection: Leukacytapheresis and bone marrow harvest.
AU Auquier, P.; Macquart-Moulin, G. (1); Moatti, J. P.; Blache, J. L.; Novakovitch, G.; Blaise, D.; Faucher, C.; Viens, P.; Maraninchi, D.
CS (1) INSERM U 379, Inst. Paoli-Calmettes, 232 Boulevard Sainte-Marguerite, 13273 Marseille Cedex 9 France
SO Bone Marrow Transplantation, (1995) Vol. 16, No. 4, pp. 541-547.
ISSN: 0268-3369.
DT Article
LA English

AB The aim of this study was to compare anxiety, pain and discomfort of cancer patients submitted to either peripheral blood progenitor cell collection (PBPCC) or bone marrow harvest (BMH). Patients, randomized (7/1993-2/1994), in view of autograft, to receive the first procedure or the second one, completed self-administered questionnaires. Anxiety was assessed by the State Trait Anxiety Inventory and pain using visual analogical scale (VAS) and McGill Pain questionnaire. Before the procedure, BMH patients (n = 25) experienced more anxiety (P lt 0.01) and more trouble or inconvenience for having to come and stay at the hospital (P lt 0.0001) than PBPCC patients (n = 40). Pain due to BMH is significantly higher than pain induced by PBPCC (P lt 0.001 for VAS and total McGill score). However, patients submitted to PBPCC with a femoral catheter (n = 19) had significantly higher total McGill scores and ***sensory*** sub-scores than patients without it (n = 21). At discharge from the hospital, PBPCC patients expressed more positive judgements towards the collection procedure than BMH patients. These results suggest that a better patient acceptability of high-dose chemotherapy followed by autograft may be obtained by substituting PBPCC for BMH for stem cell collection.

L3 ANSWER 7 OF 30 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1995:500603 BIOSIS
DN PREV199598524153
TI Infectious disease transmission through cell, tissue, and organ transplantation: Reducing the risk through donor selection.
AU Eastlund, Ted
CS American Red Cross, N. Central Tissue Serv., 100 S. Robert St., St. Paul, MN 55107 USA
SO Cell Transplantation, (1995) Vol. 4, No. 5, pp. 455-477.
ISSN: 0963-6897.
DT General Review
LA English
AB The incidence of cell transplant-transmitted infection is unknown and can only be inferred from prospective studies-that have not yet been performed and reported. The possibility of donor-to-recipient disease transmission through cell transplant therapy can be considered by reviewing the risk associated with other transplanted tissues and organs. Viral, bacterial, and fungal infections have been transmitted via transplantation of organs, tissue allografts such as bone, skin, cornea, and heart valves, and cells such as islets, ***hematopoietic*** ***stem*** ***cells*** , and semen. Several types of protozoan and worm parasites have been transferred via organ transplants. Bone allografts have transmitted hepatitis, tuberculosis, and human immunodeficiency virus (HIV-1). Corneas have transmitted rabies, Creutzfeldt-Jakob disease (CJD), hepatitis B (HBV), cytomegalovirus (CMV), herpes simplex virus (HSV), bacteria, and fungi. Heart valves have been implicated in transmitting tuberculosis and hepatitis B. HIV-1 and CMV seroconversion has been reported in patients receiving skin from seropositive donors. CJD has been transmitted by dura and pericardium transplants. Over the past several years, improvements in donor screening criteria, such as excluding potential donors with infection and those with behaviors risky for HIV-1 and hepatitis infection, and introduction of new donor blood tests have greatly reduced the risk of HIV-1 and hepatitis and may have nearly eliminated the risk of tuberculosis and CJD. Prior to use, many tissues are exposed to antibiotics, disinfectants, and sterilants, which further reduce or remove the risk of transmitted disease. Because organs, cells, and some tissue grafts cannot be subjected to sterilization steps, the risk of infectious disease transmission remains and thorough donor screening and testing is especially important.

L3 ANSWER 8 OF 30 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1995:340840 BIOSIS
DN PREV199598355140
TI HLA-B27 transgenic rats: An animal model for human spondyloarthropathies.
AU Breban, Maxime (1); Hammer, Robert E.; Taurog, Joel D.
CS (1) Clinique Rhumatologie, Hopital Cochin, 27 rue du Faubourg Saint Jacques, 75647 Paris Cedex 14 France
SO Revista Espanola de Reumatologia, (1994) Vol. 21, No. 10, pp. 421-422.
ISSN: 0304-4815.
DT Article
LA English

L3 ANSWER 9 OF 30 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1995:15187 BIOSIS
DN PREV199598029487
TI High dose taxol/cyclophosphamide/cisplatin (Taxol/CPA/cDDP) and autologous ***hematopoietic*** ***stem*** ***cell*** support (AHPCS) for advanced breast cancer. A phase I trial.
AU Stemmer, S. M.; Bearman, S. I.; Shpall, E. J.; Purdy, M.; Matthes, S.; Dufton, C.; Jones, R. B.
CS Bone Marrow Transplant Program, Univ. Colorado Health Sci. Center, Denver, CO 80262 USA
SO Breast Cancer Research and Treatment, (1994) Vol. 32, No. SUPPL., pp. 64. Meeting Info.: 17th Annual San Antonio Breast Cancer Symposium on Breast Cancer Research and Treatment San Antonio, Texas, USA December 6-10, 1994
ISSN: 0167-6806.
DT Conference
LA English

L3 ANSWER 10 OF 30 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1993:456978 BIOSIS
DN PREV199396101878
TI Myeloablative radiochemotherapy and ***hematopoietic*** ***stem*** - ***cell*** rescue in poor-prognosis Ewing's sarcoma.
AU Burdach, S. (1); Juergens, H.; Peters, C.; Nuernberger, W.; Mauz-Koerholz, C.; Koerholz, D.; Paulussen, M.; Pape, H.; Dilloo, D.; et al.
CS (1) Dep. Pediatr. Hematol. Oncol., Kinderklin., Heinrich Heine Univ. Med. Cent., Moorenstr. 5, DW-4000 Duesseldorf 1 Germany
SO Journal of Clinical Oncology, (1993) Vol. 11, No. 8, pp. 1482-1488.
ISSN: 0732-183X.
DT Article
LA English
AB Purpose: The prognosis of patients with multifocal primary and early or multiple relapsed Ewing's sarcoma is poor with conventional chemoradiotherapy and surgery. We evaluated the efficacy and feasibility of a myeloablative regimen administered as consolidation treatment for these patients. Patients and Methods: The ablative regimens consisted of simultaneous radiochemotherapy: 12 Gy hyperfractionated total-body irradiation (TBI; two doses of 1.5 Gy for 4 days) plus fractionated high-dose melphalan (30 to 45 mg/m-2 for 4 days) followed by high-dose etoposide (40 to 60 mg/kg) with or without carboplatin (900 to 1,50 mg/m-2) (hyper-ME +- C). These regimens were applied in a dose-escalation study that included 17 patients. All patients underwent remission induction chemotherapy and local treatment before myeloablative therapy. Seven patients had multifocal primary Ewing's sarcoma, and 10 had early or multiple relapse. We performed a matched-cohort analysis of the 17 grafted patients with 41 historic controls matched for sex, age, diagnosis, extent of disease, interval from diagnosis to transplant in the transplant group, and interval from diagnosis to relapse in the control group. Results: The probability of relapse in the study patients is 52% at 6 years after the last event before transplantation. in the control group, the probability of relapse at 6 years was 98%. Eight of 17 treated patients are alive in complete remission at a median observation time of 49 months (range, 19 to 76) from the last event before transplantation. Probability of relapse-free survival in the study patients is 45% +- 12% at 6 years after the last event before transplant, compared with 2% +- 2% for the historic control group. Conclusion: Myeloablative therapy with hyper-ME +- C radiochemotherapy con improve the prognosis of multifocal primary and early or multiple relapsing Ewing's sarcoma.

L3 ANSWER 11 OF 30 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1986:383555 BIOSIS
DN BA82:78531
TI WHEAT GERM AGGLUTININ-RICIN A-CHAIN CONJUGATE IS NEURONOTOXIC AFTER VAGAL INJECTION.
AU OELTMANN T N; WILEY R G
CS NEUROLOGY SERVICE, VA ADMINISTRATION MED. CENTER, 1310 24TH AVE. SOUTH, NASHVILLE, TN 37203, USA.
SO BRAIN RES, (1986) 377 (2), 221-228.
CODEN: BRREAP. ISSN: 0006-8993.
FS BA; OLD
LA English
AB 'Suicide transport' is a term coined to describe the use of retrogradely axonally transported toxin to produce anatomically selective neural lesions. As a first step in developing neuron type-selective, systemically non-toxic suicide transport agents, a prototype hybrid toxin consisting of ricin A-chain (RTA) disulfide coupled to wheat germ agglutinin (WGA) was synthesized by first derivatizing WGA by reaction with N-succinimidyl-3-(2-pyridyldithio)-propionate (SPDP) in the presence of N-acetylglucosamine and then formation of WGA-SS-RTA by mixing the derivatized WGA with reduced RTA. The ability of this conjugate to inhibit protein synthesis was tested on two cell lines in vitro; the ID50 was 0.2 nM using the K562 ***hematopoietic*** ***stem*** ***cell*** line and 0.02 nM for the 2a neuroblastoma cell line. Suicide transport activity was assessed by microinjection of hybrid into the cervical vagus nerve of rats. Intact WGA-SS-RTA, but not hybrid that was pretreated with dithiothreitol to uncouple RTA from the WGA carrier, reliably killed vagal ***motor*** neurons. Both intact and reduced hybrid killed vagal ***sensory*** neurons. Indirect peroxidase immunohistochemistry deomonstrated transport of RTA to vagal ***sensory*** neurons and WGA to both vagal ***sensory*** and ***motor*** neurons. These results are the first evidence that a hybrid toxin can be active as a suicide transport agent.

L3 ANSWER 12 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 1999142414 EMBASE
TI Leukodystrophy and bone marrow transplantation: Role of mixed hematopoietic chimerism.
AU Kaufman C.L.; Ildstad S.T.
CS Dr. C.L. Kaufman, University of Louisville, School of Medicine, Louisville, KY 40292, United States. clkcti@aol.com.edu
SO Neurochemical Research, (1999) 24/4 (537-549).
Refs: 90
ISSN: 0364-3190 CODEN: NEREDZ
CY United States
DT Journal; Article
FS 008 Neurology and Neurosurgery
025 Hematology

029 Clinical Biochemistry
037 Drug Literature Index
LA English
SL English
AB Bone Marrow Transplantation (BMT) is currently the most physiologic treatment for some types of leukodystrophies. In enzyme deficiency states, replacement of defective genes with cells carrying 'normal' copies of these genes offers a natural form of gene therapy. This review will cover the various disease states which may be treated using bone marrow transplantation as well as the obstacles and advantages offered by this treatment modality. The potential for mixed hematopoietic chimerism, with reference to the advantages and disadvantages of treating various leukodystrophies, is reviewed. Finally, certain approaches which would reduce the morbidity and mortality associated with conventional BMT are discussed. If these obstacles can be overcome, BMT may offer the hope of cure to a number, but certainly not all, leukodystrophies.

L3 ANSWER 13 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 1999109921 EMBASE
TI Approaches to brain tumors in children.
AU Cohen B.H.
CS Dr. B.H. Cohen, Tumor Center, Cleveland Clinic Foundation, 9500 Euclid Ave., Cleveland, OH 44195, United States
SO Neurologist, (1999) 5/2 (75-89).
Refs: 89
ISSN: 1074-7931 CODEN: NROLFW
CY United States
DT Journal; General Review
FS 007 Pediatrics and Pediatric Surgery
008 Neurology and Neurosurgery
016 Cancer
037 Drug Literature Index
LA English
SL English
AB BACKGROUND - Over the course of a career, the neurologist and child neurologist will diagnose and participate in treating at least several children with brain tumors. The proliferation of neuro-oncology centers in larger medical centers lends to the referral of patients to those centers, sometimes a distance from home, where patients can receive state-of-the-art care. However, there continues to be a role for the non-subspecialist neurologist in caring for children with brain tumors, both during and after therapy is completed. The fam lies will often look to a neurologist who does not have an affiliation with the larger medical centers for an opinion regarding treatment options. During treatment, the neurologist will often monitor anticonvulsant therapy; after treatment, the community neurologist will often provide care to that child for many years. REVIEW SUMMARY - New surgical techniques have made aggressive attempts at tumor removal safer than in the past. In some instances, less invasive surgical approaches will result in the same result, without the need for a craniotomy or ventriculoperitoneal shunt. Improvements in radiotherapy techniques will allow for increasingly conformal approaches to treating only the volume of tumor and brain intended, which will hopefully result in less ***cognitive*** toxicity. New medications for treating the most common malignant brain tumor in children, the medulloblastoma, have resulted in greatly improved survival and will allow for the radiotherapy dose to be reduced to a more tolerable dose. Aggressive approaches to delivering high-dose chemotherapy are still controversial, but the initial data in infants suggest that ***cognitive*** function is spared if radiotherapy can be delayed, although there is significant early treatment toxicity, as well as delayed second malignancies. CONCLUSION - There have been a number of advances in caring for children with brain tumors. Complete surgical excision without complication remains the major problem encountered for the child a low-grade neoplasm. For most high-grade tumors, disease control without unacceptable toxicity remains the goal for the future. In this article, I review recent advances in terms of pathogenesis and new concepts in pathology, as well as advances in brain tumor management.

L3 ANSWER 14 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 1998390431 EMBASE
TI Two new pseudopod morphologies displayed by the human hematopoietic KG1a progenitor cell line and by primary human CD34+ cells.
AU Francis K.; Ramakrishna R.; Holloway W.; Palsson B.O.
CS Dr. B.O. Palsson, Department of Bioengineering, University of Califorina San Diego, Mail Code 0412, 9500 Gilman Dr, San Diego, CA 92093-0412, United States
SO Blood, (15 Nov 1998) 92/10 (3616-3623).
Refs: 40
ISSN: 0006-4971 CODEN: BLOOAW
CY United States
DT Journal; Article
FS 025 Hematology
LA English
SL English
AB A primitive human hematopoietic myeloid progenitor cell line, KG1a, characterized by high expression of the CD34 surface antigen has been observed to extend long, thin pseudopodia. Once extended, these pseudopods may take on one of two newly described morphologies, tenupodia or magnupodia. Tenupodia are very thin and form in linear segments. They adhere to the substrate, can bifurcate multiple times, and often appear to connect the membranes of cells more than 300 .mu.m apart. Magnupodia are much thicker and have been observed to extend more than 330 .mu.m away from the cell. Magnupods are flexible and can exhibit rapid dynamic motion, extending or retracting in a few seconds. During retraction, the extended material often pools into a bulb located on the pod. Both morphologies can adhere to substrates coated with fibronectin, collagen IV, and laminin as well as plastic. The CD34 and CD44 antigens are also present on the surface of these podia. Primary human CD34+ cells from fetal liver, umbilical cord blood, adult bone marrow, and mobilized peripheral blood extend these podia as well. The morphology that these pseudopods exhibit suggest that they may play both ***sensory*** and mechanical roles during cell migration and homing after bone marrow transplantation.

L3 ANSWER 15 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 1998191571 EMBASE
TI Dose escalation of the hypoxic cell sensitizer etanidazole combined with ifosfamide, carboplatin, etoposide, and autologous ***hematopoietic*** ***stem*** ***cell*** support.
AU Elias A.D.; Wheeler C.; Ayash L.J.; Schwartz G.; Ibrahim J.; Mills L.; McCauley M.; Coleman N.; Warren D.; Schnipper L.; Antman K.H.; Teicher B.A.; Frei III E.
CS A.D. Elias, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115, United States
SO Clinical Cancer Research, (1998) 4/6 (1443-1449).
Refs: 42
ISSN: 1078-0432 CODEN: CCREF4
CY United States
DT Journal; Article
FS 016 Cancer
037 Drug Literature Index
LA English
SL English
AB Multiple mechanisms of drug resistance contribute to treatment failure. Although high-dose therapy attempts to overwhelm these defenses pharmacologically, this approach is only successful in a fraction of treated patients. Many drug resistance mechanisms are shared between malignant and normal cells, but the expression of various drug resistance mechanisms associated with hypoxia is largely confined to tumor tissue. Thus, reversal of this mechanism is likely to provide a therapeutic advantage to the host. This study was designed to define the dose-limiting toxicities and maximum tolerated dose of etanidazole when it is given concurrently with high-dose ifosfamide, carboplatin, and etoposide (ICE), with ***hematopoietic*** ***stem*** ***cell*** support. The maximum tolerated doses of high-dose ICE were administered concurrently with dose escalations of etanidazole, a hypoxic cell sensitizer. All agents were given by 96-h continuous i.v. infusion beginning on day -7. Mesna uroprotection was provided. Autologous marrow and cytokine mobilized peripheral blood progenitor cells were reinfused on day 0. Granulocyte colony-stimulating factor was administered following reinfusion until the granulocytes recovered to >1000/.mu.l. Fifty-five adults with advanced malignancies were enrolled in cohorts of five to nine patients. Four dose levels of etanidazole between 3 and 5.5 g/m2/day (12, 16, 20, and 22 g/m2 total doses) and two doses of carboplatin (1600 and 1800 mg/m2 total doses) were evaluated. Seven patients died of organ toxicity (13%); two each from veno-occlusive disease of liver and sepsis; and one each from sudden death, renal failure, and refractory thrombocytopenic hemorrhage. Five deaths occurred at the top dose level. One additional patient suffered a witnessed cardiorespiratory arrest from ventricular fibrillation and was resuscitated. Dose-dependent and largely reversible peripheral neuropathy was observed consisting of two syndromes: severe cramping myalgic/neuralgic pain, predominantly in stocking glove distribution, occurring between day -3 and day 0, and a ***sensory*** peripheral neuropathy with similar distribution peaking around day +60. The maximal achievable dose of etanidazole (16 g/m2 dose level) resulted in a mean serum level of 38 .mu.g/ml (25-55 .mu.g/ml). Etanidazole significantly enhanced host toxicity of high-dose ICE. Effective modulatory doses of etanidazole could not be given with acceptable toxicity using this schedule.

L3 ANSWER 16 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 1998148225 EMBASE
TI Severe neuropathy after high dose carboplatin in three patients receiving multidrug chemotherapy.
AU Heinzlef O.; Lotz J.-P.; Roullet E.
CS Dr. O. Heinzlef, Service de Neurologie, Hopital Tenon, 4 rue de la Chine, 75970 Paris Cedex 20, France. olivier.heinzlef@tnn.ap-hop-paris.fr
SO Journal of Neurology Neurosurgery and Psychiatry, (1998) 64/5 (667-669).
Refs: 11
ISSN: 0022-3050 CODEN: JNNPAU
CY United Kingdom
DT Journal; Article
FS 008 Neurology and Neurosurgery
016 Cancer
028 Urology and Nephrology
030 Pharmacology
037 Drug Literature Index
038 Adverse Reactions Titles
LA English
SL English
AB Three patients are described who developed a severe neuropathy after chemotherapy with high dose cis-diamine-(1,1-cyclobutane dicarboxylato) platinum (carboplatin). This toxic side effect, which is unusual at conventional doses, might become more frequent as increasing doses are

administered to overcome drug resistance in cancer treatment, and might limit its use at very high doses before haematopoietic stem cell transplantation.

L3 ANSWER 17 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 97123173 EMBASE
DN 1997123173
TI Efficient collection of peripheral blood stem cells using the Fresenius AS104 in chronic myelocytic leukemia patients with very high numbers of platelets.
AU Komatsu F.; Ishida Y.
CS Dr. F. Komatsu, Blood Transfusion Service, School of Medicine, Tokyo Medical and Dental University, Yushima 1-5-45, Bunkyoku, Tokyo 113, Japan
SO Journal of Hematotherapy, (1997) 6/2 (133-136).
Refs: 11
ISSN: 1061-6128 CODEN: JOEMEL
CY United States
DT Journal; Article
FS 025 Hematology
LA English
SL English
AB For chronic myelocytic leukemia patients with very high numbers of platelets, we describe an efficient method for the collection of peripheral blood stem cells (PBSC) using the Fresenius AS104 cell separator. In these patients, it is difficult to collect a sufficient number of PBSC, due to the platelet band interfering with the machine's red cell interface ***sensor*** . We, therefore, tried a manual adjustment of the device. The collection phase was set automatically. When the whole blood began to separate into the red cell layer and plasma (plus mononuclear cell) layer, the red cell interface setting of '7:1' was changed to 'OFF,' and the plasma pump flow rate was controlled manually in order to locate the interface position 1 cm from the outside wall of the centrifuge chamber. After the collection phase, the procedure was returned to the automatic setting. By repeating this procedure, we were able to collect large numbers of PBSC.

L3 ANSWER 18 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 96327648 EMBASE
DN 1996327648
TI High-dose chemotherapy with AHPCS for the treatment of breast cancer. The University of Colorado results.
AU Cagnoni P.J.; Shpall E.J.; Bearman S.I.; Ross M.; Jones R.B.
CS The University of Colorado, Bone Marrow Transplant Program,Denver, CO, United States
SO Bone Marrow Transplantation, (1996) 18/SUPPL. 1 (S26-S29).
ISSN: 0268-3369 CODEN: BMTRE
CY United Kingdom
DT Journal; Conference Article
FS 016 Cancer
030 Pharmacology
037 Drug Literature Index
038 Adverse Reactions Titles
LA English

L3 ANSWER 19 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 96137511 EMBASE
DN 1996137511
TI High-dose paclitaxel, cyclophosphamide, and cisplatin with autologous hematopoietic progenitor-cell support: A phase I trial.
AU Stemmer S.M.; Cagnoni P.J.; Shpall E.J.; Bearman S.I.; Matthes S.; Dufton C.; Day T.; Taffs S.; Hami L.; Martinez C.; Purdy M.H.; Arron J.; Jones R.B.
CS Colorado Univ. Health Sciences Ctr., Box B-190, 4200 E Ninth Ave,Denver, CO 80262, United States
SO Journal of Clinical Oncology, (1996) 14/5 (1463-1472).
ISSN: 0732-183X CODEN: JCONDN
CY United States
DT Journal; Article
FS 016 Cancer
025 Hematology
037 Drug Literature Index
038 Adverse Reactions Titles
LA English
SL English
AB Purpose: To determine the maximal-tolerated dose (MTD) of paclitaxel in combination with high-dose cyclophosphamide (CPA) and cisplatin (cDDP) followed by autologous hematopoietic progenitor-cell support (AHPCS). Patients and Methods: Forty-nine patients with poor-prognosis breast cancer, non-Hodgkin's lymphoma (NHL), or ovarian cancer were treated with escalating doses of paclitaxel infused over 24 hours, followed by CPA (5,625 mg/m2 intravenously over 1 hour in three divided doses) and cDDP (165 mg/m2 intravenously as a continuous infusion over 72 hours) and AHPCS. Pharmacokinetic measurements for each drug were performed. Results: Dose- limiting toxicities were encountered in two patients at 825 mg/m2 of paclitaxel; one patient died of multiorgan failure that involved the lungs, CNS, and kidneys, and the other developed grade 3 respiratory, CNS, and renal toxicity, which resolved. The MTD of this combination was determined to be paclitaxel 775 mg/m2, CPA 5,625 mg/m2, and cDDP 165 mg/m2 followed by AHPCS. ***Sensory*** polyneuropathy and mucositis were prominent toxicities, but both were reversible and tolerable. The pharmacokinetics of paclitaxel correlated significantly with the severity of mucositis (P < .001) and peripheral neuropathy (P < .00004). Eighteen of 33 patients (54%) with measurable, heavily pretreated metastatic breast cancer achieved a partial response (PR). Responses were also observed in patients with NHL (four of five patients) and ovarian cancer (two of two). Conclusion: It is possible to escalate the dose of paclitaxel to 775 mg/m2 in combination with 5,625 mg/m2 of CPA, 165 mg/m2 of cDDP, and AHPCS. An encouraging response rate in poor-prognosis patients with breast cancer, NHL, and ovarian cancer warrants further study.

L3 ANSWER 20 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 96125648 EMBASE
DN 1996125648
TI The expression of the endothelial cell antigen CD34 in demyelinating disease.
AU Allen I.V.; McQuaid S.; McMahon J.; Crangle K.; McConnell R.
CS Multiple Sclerosis Research Labs., Department of Neuropathology, Institute of Pathology, Grosvenor Road,Belfast BT12 6BA, United Kingdom
SO Neuropathology and Applied Neurobiology, (1996) 22/2 (101-107).
ISSN: 0305-1846 CODEN: NANEDL
CY United Kingdom
DT Journal; Article
FS 005 General Pathology and Pathological Anatomy
008 Neurology and Neurosurgery
026 Immunology, Serology and Transplantation
LA English
SL English
AB In this study, the antigenic expression of CD34, a 110 kDa glycoprotein which is expressed on human haemopoietic progenitor cells and vascular endothelium, has been assessed in a variety of neuropathological conditions, including infectious and demyelinating disease. Using immunoperoxidase staining on paraffin sections, the immunohistochemical results show that CD34 antigen is expressed widely on human CNS endothelium in grey and white matter, in the eye including retina, and in the anterior and posterior lobes of the pituitary. In demyelinating disease CD34 antigen expression was not detected in acute lesions, whereas strong expression was observed in old lesions. CD34 endothelial positivity was observed in areas of gliosis, vasogenic oedema, vascular disease and in ***Alzheimer*** 's and ***Parkinson*** 's disease pathology. A general pattern emerged, with CD34 antigen reactivity predominantly negative in areas of inflammation with demyelination but positive in adjacent non-inflamed tissue, irrespective of myelin pathology. We conclude that perivascular inflammation is a key factor in the absence of immunoreactivity of CD34 in the CNS in demyelinating disease.

L3 ANSWER 21 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 95330897 EMBASE
DN 1995330897
TI Comparison of anxiety, pain and discomfort in two procedures of ***hematopoietic*** ***stem*** ***cell*** collection: Leukacytapheresis and bone marrow harvest.
AU Auquier P.; Macquart-Moulin G.; Moatti J.; Blache J.; Novakovitch G.; Blaise D.; Faucher C.; Viens P.; Maraninchi D.
CS INSERM U 379, Institut Paoli-Calmettes, 232 Boulevard de Sainte-Marguerite,13273 Marseille Cedex 9, France
SO Bone Marrow Transplantation, (1995) 16/4 (541-547).
ISSN: 0268-3369 CODEN: BMTRE
CY United Kingdom
DT Journal; Article
FS 007 Pediatrics and Pediatric Surgery
016 Cancer
017 Public Health, Social Medicine and Epidemiology
025 Hematology
LA English
SL English
AB The aim of this study was to compare anxiety, pain and discomfort of cancer patients submitted to either peripheral blood progenitor cell collection (PBPCC) or bone marrow harvest (BMH). Patients, randomized (7/1993-2/1994), in view of autograft, to receive the first procedure or the second one, completed self-administered questionnaires. Anxiety was assessed by the State Trait Anxiety Inventory and pain using visual analogical scale (VAS) and McGill Pain questionnaire. Before the procedure, BMH patients (n = 25) experienced more anxiety (P < 0.01) and more trouble or inconvenience for having to come and stay at the hospital (P < 0.0001) than PBPCC patients (n = 40). Pain due to BMH is significantly higher than pain induced by PBPCC (P < 0.001 for VAS and total McGill score). However, patients submitted to PBPCC with a femoral catheter (n = 19) had significantly higher total McGill scores and ***sensory*** sub-scores than patients without it (n = 21). At discharge from the hospital, PBPCC patients expressed more positive judgements towards the collection procedure than BMH patients. These results suggest that a better patient acceptability of high-dose chemotherapy followed by autograft may be obtained by substituting PBPCC for BMH for stem cell collection.

L3 ANSWER 22 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 94066587 EMBASE
DN 1994066587
TI Peripheral neuropathy after autologous blood stem cell transplantation for multiple myeloma.
AU Boiron J.-M.; Ellie E.; Vital A.; Marit G.; Reme T.; Vital C.; Broustet A.; Reiffers J.
CS Laboratoire de greffe de moelle, URA CNRS 1456, Universite de Bordeaux II, 146 rue Leo Saignat,33076 Bordeaux, France

SO Leukemia, (1994) 8/2 (322-326).
ISSN: 0887-6924 CODEN: LEUKED
CY United Kingdom
DT Journal; Article
FS 008 Neurology and Neurosurgery
016 Cancer
025 Hematology
037 Drug Literature Index
LA English
SL English
AB We report a case of peripheral neuropathy occurring after autologous blood stem cell transplantation (ABSCT) for multiple myeloma. The patient free of neurological symptoms, was transplanted in partial remission, and achieved a complete remission after transplantation. A severe peripheral, symmetric, distal ***sensori*** - ***motor*** polyneuropathy appeared at day 25 and worsened progressively until commencement of corticosteroid therapy. A peripheral nerve biopsy showed endoneurial cellular infiltrates which were predominantly composed of T cells identified by immunocytochemistry. Ultrastructural examination showed acute axonal damage. Electrophysiologic studies performed before and during the treatment were consistent with a severe axonal degeneration and showed a marked improvement, concomitant with the favorable clinical outcome. This is the first report of peripheral neuropathy after ABSCT.

L3 ANSWER 23 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 92345476 EMBASE
DN 1992345476
TI Expression of leukocyte antigen CD34 by brain capillaries in ***Alzheimer*** 's disease and neurologically normal subjects.
AU Kalaria R.N.; Kroon S.N.
CS Department of Neurology, Case Western Reserve University, School of Medicine, 2074 Abington Road,Cleveland OH 44106, United States
SO Acta Neuropathologica, (1992) 84/6 (606-612).
ISSN: 0001-6322 CODEN: ANPTAL
CY Germany
DT Journal; Article
FS 005 General Pathology and Pathological Anatomy
008 Neurology and Neurosurgery
LA English
SL English
AB We studied the expression of a hemopoietic progenitor cell antigen, designated CD34, in brains from subjects with ***Alzheimer*** 's disease (AD) and non-neurological controls. Immunoblots of brain microvessel proteins probed with monoclonal antibody QBEND/10 to the leukocyte antigen CD34 recognized a protein band with an apparent molecular mass of 90-100 kDa. Immunocytochemical staining of brain tissue sections showed CD34 to be expressed by all microvasculature including those of the circumventricular organs. In normal control brains such specific staining exhibited by (QBEND/10 was indistinguishable from that obtained with collagen IV antibodies. In AD, however, increased vascular tendrils in form of endothelial abluminal processes and intraparenchymal abnormalities were evident in cortical and hippocampal regions, predominant in cases with severe pathology. Our results demonstrate that the leukocyte antigen CD34 is localized with the vascular endothelium throughout the human brain. These results also suggest that CD34 detects endothelial normalities in brains of AD subjects and support previous observations on the usefulness of CD34 to label abluminal microprocesses.

L3 ANSWER 24 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 91059960 EMBASE
DN 1991059960
TI Transplantation of fetal cells.
AU Crombleholme T.M.; Langer J.C.; Harrison M.R.; Zanjani E.D.
CS The Fetal Treatment Program, University of California, 3rd and Parnassus, HSE 585,San Francisco, CA 94143-0570, United States
SO American Journal of Obstetrics and Gynecology, (1991) 164/1 I (218-230).
ISSN: 0002-9378 CODEN: AJOGAH
CY United States
DT Journal; General Review
FS 010 Obstetrics and Gynecology
021 Developmental Biology and Teratology
026 Immunology, Serology and Transplantation
LA English
SL English
AB Cellular transplantation is an attractive alternative to whole-organ transplantation when only a discrete function of the organ is deficient. Early fetal donor cells have an advantage because they engraft readily and do not cause graft-versus-host disease. Similarly, the fetus is an ideal recipient of allogeneic fetal cells as it is incapable of rejecting them early in gestation. This review presents the theoretical rationale, recent research advances, and clinical implications for adults with diabetes mellitus and ***Parkinson*** 's disease; we also describe in utero transplantation of fetal ***hematopoietic*** ***stem*** ***cells*** and hepatocytes for the treatment of inherited hemotologic and hepatic deficiencies, as well as the use of fetal islet cells and dopamine-producing cells to treat postnatal conditions.

L3 ANSWER 25 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 88161424 EMBASE
DN 1988161424
TI An update on mast cell heterogeneity.
AU Bienenstock J.
CS Department of Pathology, McMaster University, Hamilton, Ont. L8N 3Z5, Canada
SO Journal of Allergy and Clinical Immunology, (1988) 81/5 I (763-769).
ISSN: 0091-6749 CODEN: JACIBY
CY United States
DT Journal
FS 005 General Pathology and Pathological Anatomy
015 Chest Diseases, Thoracic Surgery and Tuberculosis
025 Hematology
026 Immunology, Serology and Transplantation
030 Pharmacology
037 Drug Literature Index
LA English
SL English
AB There is good evidence for mast cell heterogeneity in both the rat and the human. Up to now, the functional differences between the two cell types, in the human, and reflected by differences in response to secretagogues and antiallergics, as well as the mediators synthesized and secreted by these cells, have not completely held up when these cells were compared to the rat counterpart. Nevertheless, the presence of different proteases in these two different cells in man suggest that they may have different functions. The concept that the local tissue environment determines the predominant type of mast cell found in tissue sites is an important biologic, as well as potentially therapeutically, significant observation. The observation that mast cells are in structural association with the nerves and presumably communicate with them and the observations that NGF may act as a growth factor not only for peripheral nervous tissue of the ***sensory*** afferent and sympathetic type but also for ***hematopoietic*** ***stem*** ***cells*** , especially those of the metachromatic cell type, indicate the complexity of allergic and inflammatory reactions. There is considerable evidence supporting the view that mast cells and nerves may form a functional unit in several different tissues, including the intestine and lung, and I have reviewed this briefly elsewhere. The subject of mast cell heterogeneity continues to develop and expand.

L3 ANSWER 26 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 86210333 EMBASE
DN 1986210333
TI Wheat germ agglutinin-ricin A-chain conjugate is neuronotoxic after vagal injection.
AU Oeltmann T.N.; Wiley R.G.
CS Department of Neurology, Vanderbilt University Medical School, Nasvhille, TN, United States
SO Brain Research, (1986) 377/2 (221-228).
CODEN: BRREAP
CY Netherlands
DT Journal
FS 002 Physiology
052 Toxicology
008 Neurology and Neurosurgery
LA English
AB 'Suicide transport' is a term coined to describe the use of retrogradely axonally transported toxin to produce anatomically selective neural lesions. As a first step in developing neuron type-selective, systemically non-toxic suicide transport agents, a prototype hybrid toxin consisting of ricin A-chain (RTA) disulfide coupled to wheat germ agglutinin (WGA) was synthesized by first derivatizing WGA by reaction with N-succinimidyl-3-(2-pyridyldithio)-propionate (SPDP) in the presence of N-acetylglucosamine and then formation of WGA-SS-RTA by mixing the derivatized WGA with reduced RTA. The ability of this conjugate to inhibit protein synthesis was tested on two cell lines in vitro; the ID50 was 0.2 nM using the K562 ***hematopoietic*** ***stem*** ***cell*** line and 0.02 nM for the 2a neuroblastoma cell line. Suicide transport activity was assessed by microinjection of hybrid into the cervical vagus nerve of rats. Intact WGA-SS-RTA, but not hybrid that was pretreated with dithiothreitol to uncouple RTA from the WGA carrier, reliably killed vagal ***motor*** neurons. Both intact and reduced hybrid killed vagal ***sensory*** neurons. Indirect peroxidase immunohistochemistry demonstrated transport of RTA to vagal ***sensory*** neurons and WGA to both vagal ***sensory*** and ***motor*** neurons. These results are the first evidence that a hybrid toxin can be active as a suicide transport agent.

L3 ANSWER 27 OF 30 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 81175235 EMBASE
DN 1981175235
TI Polycythemia: Mechanisms and management.
AU Golde D.W.; Hocking W.G.; Koeffler H.P.; Adamson J.W.
CS Div. Hematol. Oncol., Dept. Med., UCLA Sch. Med., Los Angeles, Calif. 90024, United States
SO Annals of Internal Medicine, (1981) 95/1 (71-87).
CODEN: AIMEAS
CY United States
DT Journal
FS 006 Internal Medicine
025 Hematology
037 Drug Literature Index
LA English
AB The principal function of erythrocytes is the transport of oxygen. Erythropoiesis proceeds at a rate consistent with the demand for oxygen-carrying capacity, and the major regulator of erythrocyte production is erythropoietin. Erythropoietin is produced primarily by the kidney under control of a tissue oxygenation ***sensor*** . The

recently developed erythropoietin radioimmunoassay should provide a clinically useful tool. Erythrocytosis is a pathologic state characterized by an elevated erythrocyte mass, which may result from increased proliferation of erythroid progenitors due to an intrinsic cellular defect or in response to extrinsic signals. Secondary erythrocytosis results from either physiologically appropriate compensation for inadequate tissue oxygenation or from inappropriate stimulation of erythropoiesis. Erythrocytosis increases oxygen-carrying capacity of the blood, but at high hematocrit levels increased blood viscosity may result in decreased tissue oxygen delivery. Polycythemia vera is a ***hematopoietic*** ***stem*** ***cell*** disease of clonal origin. Initial results from the Polycythemia Rubra Study Group suggest that therapy with chlorambucil is associated with an unacceptably high risk for development of acute leukemia, and 32P is preferred for situations in which phlebotomy alone is insufficient.

L3 ANSWER 28 OF 30 CAPLUS COPYRIGHT 2003 ACS
AN 1999:468560 CAPLUS
DN 131:116232
TI Preparation of benzoisothiazoline S,S-dioxide derivatives as interleukin-8 (IL-8) receptor antagonists
IN Bryan, Deborah Lynne; Widdowson, Katherine L.
PA Smithkline Beecham Corporation, USA
SO PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 9936069 | A1 | 19990722 | WO 1999-US1029 | 19990115 <-- |
| W: AL, AU, BA, BB, BG, BR, CA, CN, CZ, EE, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2318195 | AA | 19990722 | CA 1999-2318195 | 19990115 <-- |
| AU 9922341 | A1 | 19990802 | AU 1999-22341 | 19990115 <-- |
| EP 1039903 | A1 | 20001004 | EP 1999-902334 | 19990115 |
| R: BE, CH, DE, ES, FR, GB, IT, LI, NL | | | | |
| JP 2002509105 | T2 | 20020326 | JP 2000-539842 | 19990115 |

PRAI US 1998-71653P P 19980116
WO 1999-US1029 W 19990115
OS MARPAT 131:116232
GI

/ Structure 3 in file .gra /

AB This invention relates to novel compds. of formula [I; A = (un)substituted CH2; R = NHC(:NX)NH(CR13R14)v-Z; X = cyano, OR11, COR11, CO2R11, SO2R22, R23, (un)substituted CONH2; Z = fused Ph, optionally substituted heteroaryl, optionally substituted C5-8 cycloalkyl, optionally substituted C1-10 alkyl, optionally substituted C2-10 alkenyl, optionally substituted C2-10 alkynyl; m = an integer having a value of 1 or 3; v = 0, or an integer having a value of 1 to 4; R1 is independently selected from hydrogen, halogen, nitro, cyano, halo-substituted C1-10 alkyl, C1-10 alkyl, C2-10 alkenyl, C1-10 alkoxy, halo-substituted C1-10 alkoxy, (CR8R8)qS(O)tR4, hydroxy-C1-4 alkyl, aryl, aryl-C1-4 alkyl, aryloxy, aryl-C1-4 alkoxy, heteroaryl, heteroaryl-C1-4 alkyl, heterocyclyl, heterocyclyl-C1-4 alkyl, heteroaryl-C1-4 alkoxy, aryl-C2-10 alkenyl, heteroaryl-C2-10 alkenyl, heterocyclic-C2-10 alkenyl, etc.; wherein R4, R5 = H, optionally substituted C1-4 alkyl, aryl, aryl-C1-4 alkyl, heteroaryl, heteroaryl-C1-4 alkyl, etc.; R8 = H, C1-4 alkyl; q = 0, 1-10; t = 0, 1,2]. These compds. are useful in the treatment of disease states mediated by the chemokine such as interleukin-8 (IL-8), GRO.alpha., GRO.beta., GRO.gamma., ENA-78, and neutrophil attractant/activation protein (NAP-2) which induce neutrophile shape change, chemotaxis, granule release, and respiratory burst. They are useful for treating psoriasis, atopic dermatitis, arthritis, asthma, chronic obstructive pulmonary disease, adult respiratory distress syndrome, inflammatory bowel disease, Crohn's disease, ulcerative colitis, stroke, septic shock, endotoxic shock, gram neg. sepsis, toxic shock syndrome, cardiac and renal reperfusion injury, glomerulonephritis, thrombosis, graft vs. host reaction, ***Alzheimer*** 's disease, allograft rejection, malaria, restenosis, angiogenesis, undesired ***hematopoietic*** ***stem*** ***cells*** release, rhinovirus infections, or periodontal disease or bone resorption disease (no data). Thus, to s stirred mixt. of cyanamide (330 mg, 8.85 mmol) and Huinig's base (0.66 mL) in acetonitrile was added a soln. of N-(1-allyl-4-chloro-2,2-dioxo-2,1-benzisothiazolin-7-yl)-N'-(2-bromophenyl)carbodiimide dropwise. The reaction mixt. was stirred at room temp. for 15 h to give N-(1-allyl-4-chloro-2,2-dioxo-1,2-benzisothiazolin-7-yl)-N'-(2-bromophenyl)-N"-cyanoguanidine. To a mixt. of the latter compd. (80 mg, 0.166 mmol) and sodium borohydride (20 mg, 0.21 mmol) in THF (8 mL) was added at room temp. tetrakistriphenylphosphine palladium[0] (8 mg). The reaction was stirred at room temp. for 2 h to give N-(4-Chloro-1,3-dihydro-2,2-dioxo-1,2-benzisothiazol-7-yl)-N'-(2-bromophenyl)-N"-cyanoguanidine.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 29 OF 30 CAPLUS COPYRIGHT 2003 ACS
AN 1998:401231 CAPLUS
DN 129:117520
TI Dose escalation of the hypoxic cell sensitizer etanidazole combined with ifosfamide, carboplatin, etoposide, and autologous ***hematopoietic*** ***stem*** ***cell*** support
AU Elias, Anthony D.; Wheeler, Catherine; Ayash, Lois J.; Schwartz, Gary; Ibrahim, Joseph; Mills, Letha; Mccauley, Mary; Coleman, Norman; Warren, Diane; Schnipper, Lowell; Antman, Karen H.; Teicher, Beverly A.; Frei, Emil, III
CS Division of Clinical Oncology, Dana-Farber Cancer, Institute, Boston, MA, 02115, USA
SO Clinical Cancer Research ( ***1998*** ), 4(6), 1443-1449
CODEN: CCREF4; ISSN: 1078-0432
PB American Association for Cancer Research
DT Journal
LA English
AB Multiple mechanisms of drug resistance contribute to treatment failure. Although high-dose therapy attempts to overwhelm these defenses pharmacol., this approach is only successful in a fraction of treated patients. Many drug resistance mechanisms are shared between malignant and normal cells, but the expression of various drug resistance mechanisms assocd. with hypoxia is largely confined to tumor tissue. Thus, reversal of this mechanism is likely to provide a therapeutic advantage to the host. This study was designed to define the dose-limiting toxicities and max. tolerated dose of etanidazole when it is given concurrently with high-dose ifosfamide, carboplatin, and etoposide (ICE), with ***hematopoietic*** ***stem*** ***cell*** support. The max. tolerated doses of high-dose ICE were administered concurrently with dose escalations of etanidazole, a hypoxic cell sensitizer. All agents were given by 96-h continuous i.v. infusion beginning on day -7. Mesna uroprotection was provided. Autologous marrow and cytokine mobilized peripheral blood progenitor cells were reinfused on day 0. Granulocyte colony-stimulating factor was administered following reinfusion until the granulocytes recovered to > 1000/.mu.l. Fifty-five adults with advanced malignancies were enrolled in cohorts of five to nine patients. Four dose levels of etanidazole between 3 and 5.5 g/m2/day (12, 16, 20, and 22 g/m2 total doses) and two doses of carboplatin (1600 and 1800 mg/m2 total doses) were evaluated. Seven patients died of organ toxicity (13%); two each from veno-occlusive disease of liver and sepsis; and one each from sudden death, renal failure, and refractory thrombocytopenic hemorrhage. Five deaths occurred at the top dose level. One addnl. patient suffered a witnessed cardiorespiratory arrest from ventricular fibrillation and was resuscitated. Dose-dependent and largely reversible peripheral neuropathy was obsd. consisting of two syndromes: severe cramping myalgic/neuralgic pain, predominantly in stocking glove distribution, occurring between day -3 and day 0, and a ***sensory*** peripheral neuropathy with similar distribution peaking around day +60. The maximal achievable dose of etanidazole (16 g/m2 dose level) resulted in a mean serum level of 38 .mu.g/mL (25-55 .mu.g/mL). Etanidazole significantly enhanced host toxicity of high-dose ICE. Effective modulatory doses of etanidazole could not be given with acceptable toxicity using this schedule.
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 30 OF 30 CAPLUS COPYRIGHT 2003 ACS
AN 1986:474126 CAPLUS
DN 105:74126
TI Wheat germ agglutinin-ricin A-chain conjugate is neuronotoxic after vagal injection
AU Oeltmann, T. N.; Wiley, R. G.
CS Med. Sch., Vanderbilt Univ., Nashville, TN, 37203, USA
SO Brain Research ( ***1986*** ), 377(2), 221-8
CODEN: BRREAP; ISSN: 0006-8993
DT Journal
LA English
AB As a 1st step in developing neuron type-selective, systemically non-toxic suicide transport agents, a prototype hybrid toxin consisting of ricin A-chain (RTA) disulfide coupled to wheat germ agglutinin (WGA) was synthesized by 1st derivatizing WGA by reaction with N-succinimidyl-3-(2-pyridyldithio)propionate in the presence of N-acetylglucosamine and then formation of WGA-SS-RTA by mixing the derivatized WGA with reduced RTA. The ability of this conjugate to inhibit protein synthesis was tested on 2 cell lines in vitro; the ID50 was 0.2 nM using the K562 ***hematopoietic*** ***stem*** ***cell*** line and 0.02 nM for the 2a neuroblastoma cell line. Suicide transport activity was assessed by microinjection of hybrid into the cervical vagus nerve of rats. Intact WGA-SS-RTA, but not hybrid that was pretreated with dithiothreitol to uncouple RTA from the WGA carrier, reliably killed vagal ***motor*** neurons. Intact and reduced hybrid killed vagal ***sensory*** neurons. Indirect peroxidase immunohistochem. demonstrated transport of RTA to vagal ***sensory*** neurons and WGA to vagal ***sensory*** and ***motor*** neurons. These results are the 1st evidence that a hybrid toxin can be active as a suicide transport agent.

=> s hematopoiet? stem cell?
2 FILES SEARCHED...

L4 26370 HEMATOPOIET? STEM CELL?

=> s l4 and (neuro? (3a) regenera? or grow?)
2 FILES SEARCHED...
L5 5348 L4 AND (NEURO? (3A) REGENERA? OR GROW?)

=> s l4 and (neuro? (3a) (regenera? or grow?))
2 FILES SEARCHED...
L6 17 L4 AND (NEURO? (3A) (REGENERA? OR GROW?))

=> dup rem l6
PROCESSING COMPLETED FOR L6
L7 13 DUP REM L6 (4 DUPLICATES REMOVED)

=> d bib abs 1-
YOU HAVE REQUESTED DATA FROM 13 ANSWERS - CONTINUE? Y/(N):y

L7 ANSWER 1 OF 13 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE
1
AN 2003:190395 BIOSIS
DN PREV200300190395
TI A human peripheral blood monocyte-derived subset acts as pluripotent stem cells.
AU Zhao, Yong; Glesne, David; Huberman, Eliezer (1)
CS (1) Biochip Technology Center, Argonne National Laboratory, Argonne, IL, 60439, USA: elih@anl.gov USA
SO Proceedings of the National Academy of Sciences of the United States of America, (March 4 2003) Vol. 100, No. 5, pp. 2426-2431. print.
ISSN: 0027-8424.
DT Article
LA English
AB We have identified, cultured, characterized, and propagated adult pluripotent stem cells (PSC) from a subset of human peripheral blood monocytes. These cells, which in appearance resemble fibroblasts, expand in the presence of macrophage colony-stimulating factor and display monocytic and ***hematopoietic*** ***stem*** ***cell*** markers including CD14, CD34, and CD45. We have induced these cells to differentiate into mature macrophages by lipopolysaccharide, T lymphocytes by IL-2, epithelial cells by epidermal growth factor, endothelial cells by vascular endothelial cell ***growth*** factor, ***neuronal*** cells by nerve ***growth*** factor, and liver cells by hepatocyte growth factor. The pluripotent nature of individual PSC was further confirmed by a clonal analysis. The ability to store, expand, and differentiate these PSC from autologous peripheral blood should make them valuable candidates for transplantation therapy.

L7 ANSWER 2 OF 13 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2001:529109 BIOSIS
DN PREV200100529109
TI Can cytokine manipulation of haematopoietic stem cells induce hepatocytic differentiation.
AU Newsome, Philip N. (1); Humphreys, Kenneth (1); Turner, Marc (1); Hayes, Peter C. (1); Plevris, John N. (1)
CS (1) University of Edinburgh, Edinburgh UK
SO Hepatology, (October, 2001) Vol. 34, No. 4 Pt. 2, pp. 266A. print.
Meeting Info.: 52nd Annual Meeting and Postgraduate Courses of the American Association for the Study of Liver Diseases Dallas, Texas, USA November 09-13, 2001
ISSN: 0270-9139.
DT Conference
LA English
SL English

L7 ANSWER 3 OF 13 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE
2
AN 2000:399431 BIOSIS
DN PREV200000399431
TI The role of the reticulo-epithelial (RE) cell network in the immuno-neuroendocrine regulation of intrathymic lymphopoiesis.
AU Bodey, Bela (1); Bodey, Bela, Jr.; Siegel, Stuart E.; Kaiser, Hans E.
CS (1) 8000, Canby Avenue, Reseda, CA, 91335 USA
SO Anticancer Research, (May June, 2000) Vol. 20, No. 3A, pp. 1871-1888. print.
ISSN: 0250-7005.
DT Article
LA English
SL English
AB The thymus provides an optimal cellular and humoral microenvironment for the development of immunocompetent T lymphocytes. Although yolk sac derived pre-T, committed ***hematopoietic*** ***stem*** ***cells*** enter the thymus using a homing receptor, the immigration process also requires secretion of a peptide, called thymotaxin by the cells of the reticulo-epithelial (RE) network of the thymic cellular microenvironment. The thymic RE cells are functionally specialized based on their location within the thymic microenvironment. Thus, although subcapsular, cortical, and medullary RE cells are derived from a common, endodermal in origin epithelial precursor cell, their unique location within the gland causes their specialization in terms of their immunophenotypical and in situ physiological properties. The subcapsular, endocrine, RE cell layer (giant or nurse cells) is comprised of cells filled with PAS positive granules, which also express A2B5/TE4 cell surface antigens and MHC Class I (HLA A,B,C) molecules. In contrast to the medullary RE cells, these subcapsular nurse cells also produce thymosins beta3 and beta4. The thymic nurse cells (TNCs) display a neuroendocrine cell specific immunophenotype (IP): Thy-1+, A2B5+, TT+, TE4+, UJ13/A+, UJ127.11+, UJ167.11+, UJ181.4+, and presence of common leukocyte antigen (CLA+). Medullar RE cells display MHC Class II (HLA-DP, HLA-DQ, HLA- DR) molecule restriction. These cells also contain transforming growth factor (TGF)-beta type II receptors and are involved in the positive selection of T cells. Transmission electronmicroscopic (TEM) observations have defined four, functional subtypes of medullary RE cells: undifferentiated, squamous, villous and cystic. All subtypes were connected with desmosomes. The secreted thy nic hormones, thymulin, thymosin -a1 and thymopoietin (its short form, thymopentin or TP5) were detected immunocytochemically to be produced by RE cells. Thymic RE cells also produce numerous cytokines including IL-1, IL-6, G-CSF, M-CSF, and GM-CSF molecules that likely are important in various stages of thymocyte activation and differentiation. The co-existence of pituitary hormone and ***neuropeptide*** secretion ( ***growth*** hormone (GH), prolactin (PRL), adrenocorticotropic hormone (ACTH), thyroid stimulating hormone (TSH), triiodothyronine (T3), somatostatin, oxytocin (OT), follicle stimulating hormone (FSH), luteinizing hormone (LH), arginine vasopressin (AVP), growth hormone releasing hormone (GHRH), corticotropin releasing hormone (CRH), nerve growth factor (NGF), vasoactive intestinal peptide (VIP), pro-enkephalin (pro-enk), and beta-endorphin (beta-end)), as well as production of a number of interleukins and growth factors and expression of receptors for all, by RE cells is an unique molecular biological phenomenon. The thymic RE cell network is most probably comprised of cells organized into sub-networks - functional units composed of RE cells with differing hormone production/hormone receptor expression profiles, involved in the various stages of T lymphocyte maturation. Furthermore, it is quite possible that even on the level of individual RE cells, the numerous projections associated with a single cell, which engulf developing lymphocytes, nurturing and guiding them in their maturation, may differ in their hormone production and/or hormone receptor expression profile, thus allowing a single cell to be involved in distinct, separate steps of the T cell maturation process. Based on our systematic observations of the thymus in humans and other mammalian species, we suggest that the thymic RE cells represent an extremely important cellular and humoral network within the thymic microenvironment and are involved in the homeopathic regulation mechanisms of the multicellular organism, in addition to the presentation of various antigens to developing lymphocytes, and providing growth regulatory signals which may range from stimulatory to apoptotic signaling within the thymus. Intrathymic T lymphocyte selection is a complex, multistep process, influenced by several functionally specialized RE cells and under immuno-neuroendocrine regulation reflecting the dynamic changes of the organism.

L7 ANSWER 4 OF 13 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2000:464043 BIOSIS
DN PREV200000464043
TI Potential role for NGF in breast cancer.
AU Hondermarck, Hubert (1)
CS (1) R and D Systems, Inc., 614 McKinley Place NE, Minneapolis, MN, 55413 USA
SO Stem Cells (Miamisburg), (2000) Vol. 18, No. 5, pp. 386-387. print.
ISSN: 1066-5099.
DT Article
LA English
SL English

L7 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 1999:644130 CAPLUS
DN 131:332545
TI Neuropilin-1 is expressed on bone marrow stromal cells: a novel interaction with hematopoietic cells?
AU Tordjman, Rafaele; Ortega, Nathalie; Coulombel, Laure; Plouet, Jean; Romeo, Paul-Henri; Lemarchandel, Valerie
CS INSERM U474, INSERM U474, Hopital Henri Mondor, Creteil, 94010, Fr.
SO Blood (1999), 94(7), 2301-2309
CODEN: BLOOAW; ISSN: 0006-4971
PB W. B. Saunders Co.
DT Journal
LA English
AB In adult bone marrow, ***hematopoietic*** ***stem*** ***cells*** are found in close assocn. with distinctive stromal cell elements. This assocn. is necessary for maintenance of hematopoiesis, but the precise mechanisms underlying the cross-talk between stromal cells and ***hematopoietic*** ***stem*** ***cells*** are poorly understood. In this study, we used a bone marrow stromal cell line (MS-5) that is able to support human long-term hematopoiesis. This hematopoietic-promoting activity cannot be related to expression of known cytokines and is abolished by addn. of hydrocortisone. Using a gene trap strategy that selects genes encoding transmembrane or secreted proteins expressed by MS-5 cells, we obtained several insertions that produced fusion proteins. In one clone, fusion protein activity was downregulated in the presence of hydrocortisone, and we show that insertion of the trap vector has occurred into the neuropilin-1 gene. Neuropilin-1 is expressed in MS-5 cells, in other hematopoietic-supporting cell lines, and in primary stromal cells but not in primitive hematopoietic cells. We show that neuropilin-1 acts as a functional cell-surface receptor in MS-5 cells. Two neuropilin-1 ligands, semaphorin III and VEGF 165, can bind to

these cells, and the addn. of VEGF 165 to MS-5 cells increases expression of 2 cytokines known to regulate early hematopoiesis, Tpo and Flt3-L. Finally, we show that stromal cells and immature hematopoietic cells express different neuropilin-1 ligands. We propose that neuropilin-1 may act as a novel receptor on stromal cells by mediating interactions between stroma and primitive hematopoietic cells.
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 6 OF 13 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 1999201188 EMBASE
TI Nerve ***growth*** factor: A ***neurotrophin*** with activity on cells of the immune system.
AU Aloe L.; Properzi S.F.
CS Dr. L. Aloe, Institute of Neurobiology, CNR, Viale Marx 15, 00137 Rome, Italy. aloe@biocell.irmkant.rm.cnr.it
SO Microscopy Research and Technique, (15 May 1999) 45/4 (285-291). Refs: 109
ISSN: 1059-910X CODEN: MRTEEO
CY United States
DT Journal; Article
FS 008 Neurology and Neurosurgery
029 Clinical Biochemistry
LA English
SL English
AB Numerous studies published in the last two decades provide evidence that nerve growth factor (NGF), a polypeptide originally discovered because of its neurotrophic activity, acts on a variety of cells of the immune system, including mast cells, eosinophils, and B and T lymphocytes. NGF has been shown to increase during inflammatory responses, autoimmune disorders, parasitic infections, and allergic diseases. Moreover, stress, which is characterized also by activation of a variety of immune cells, causes a significant increase in basal plasma NGF levels. Recently published studies reveal that hematopoietic progenitor cells seem to be able to produce and/or respond to NGF. We report these data and discuss the hypothesis of the possible implication of NGF on the functional activities of immune cells.

L7 ANSWER 7 OF 13 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE
3
AN 1999:432857 BIOSIS
DN PREV199900432857
TI Molecular biological ontogenesis of the thymic reticulo-epithelial cell network during the organization of the cellular microenvironment.
AU Bodey, Bela (1); Bodey, Bela, Jr.; Siegel, Stuart E.; Kaiser, Hans E.
CS (1) 8000 Canby Ave, Unit 1, Reseda, CA, 91335 USA
SO In Vivo (Attiki), (May June, 1999) Vol. 13, No. 3, pp. 267-294.
ISSN: 0258-851X.
DT General Review
LA English
SL English
AB The thymus provides an optimal humoral microenvironment for the development of immunocompetent T cells. Although yolk sac derived pre-T, committed ***hematopoietic*** ***stem*** ***cells*** enter the thymus using a homing receptor, the immigration process also requires secretion of a peptide called thymotaxin by the cells of the reticulo-epithelial (RE) network of the thymic cellular microenvironment. The majority of RE cells have a round or irregular pale nucleus, which contains few, scattered, chromatin granules with a defined, spherical nucleolus, rich in basic histones. Their cytoplasm occasionally displays RNP granules; and is rich in non-histone proteins, fine phospholipid, lipid or cholesterin granules, and vacuoles filled with secreted substances. The cells of the subcapsular, endocrine RE cell layer (giant or nurse cells), characterized by PAS positive granules, express A2B5/TE4 cell surface antigens and MHC Class I (HLA A,B,C) molecules. In contrast to medullar RE cells, these subcapsular nurse cells also produce thymosins beta3 and beta4. Thymic nurse cells (TNCs) display a neuroendocrine cell specific immunophenotype (IP): Thy-1+, A2B5+, TT+, TE4+, UJ13/A+, UJ127.11+, UJ167.11+, UJ181.4+, and presence of common leukocyte antigen (CLA+). Medullar RE cells display MHC Class II (HLA-DP, HLA-DQ, HLA-DR) molecule restriction. These cells also contain transforming growth factor-beta (TGF-beta) type II receptors and participate in the positive selection of T cells. Transmission electron-microscopic (TEM) observations have defined four functional subtypes of medullar RE cells: undifferentiated, squamous, villous, and cystic. All subtypes are connected by desmosomes. Immunocytochemical observations have shown that the secreted thymic hormones, thymosin a1 and thymopoietin (and its short form, thymopentin or TP5), are produced by the same RE cells. Thymic RE cells also produce numerous cytokines including IL1, IL6, G-CSF, M-CSF, and GM-CSF that likely are important in variousstages of thymocyte activation and differentiation. The co-existence of pituitary hormone and ***neuropeptide*** secretion, such as ***growth*** hormone, prolactin, adrenocorticotropic hormone, thyroid stimulating hormone, triiodothyronine, somatostatin, oxytocin, follicle stimulating hormone, luteinizing hormone, arginine vasopressin, growth hormone releasing hormone, corticotropin releasing hormone, nerve growth factor, vasoactive intestinal peptide, (pro) enkephalin, and beta-endorphin, production of a number of interleukins and growth factors, as well as the expression of receptors for all, by the same RE cell is an unique molecular biological phenomenon. These data illustrate the immensely important and diverse immuno-neuroendocrine functions of the thymic RE cellular network. Based on our systematic observations of the thymus in humans and other mammalian species, we suggest that the thymic RE cell network represents an extremely important cellular and humoral microenvironment in homeopathic regulatory mechanisms of the multicellular organism. Intrathymic T lymphocyte selection is a complex, multistep process, influenced by several functionally specialized RE cell subtypes and under constant immuno-neuroendocrine regulation, reflectingcntdotthe dynamic changes of the organism.

L7 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 1999:262962 CAPLUS
DN 131:114511
TI Neuroblastoma cells can express the hematopoietic progenitor cell antigen CD34 as detected at surface protein and mRNA level
AU Hafer, Ralf; Voigt, Astrid; Gruhn, Bernd; Zintl, Felix
CS Department of Pediatrics, University of Jena, Jena, D-07740, Germany
SO Journal of Neuroimmunology (1999), 96(2), 201-206
CODEN: JNRIDW; ISSN: 0165-5728
PB Elsevier Science B.V.
DT Journal
LA English
AB Recently, we have shown the expression of the hematopoietic precursor cell antigen CD34 on neuroblastoma cells. Here, we present the CD34 expression on 16 permanent neuroblastoma cell lines and primary cell lines at the mRNA level and the flow cytometric results on ***neuroblastoma*** cells ***grown*** in the same culture and split for flow cytometric anal. and total mRNA extn. The flow cytometry was performed using a panel of anti-CD34 antibodies covering the epitope classes I to III. In eight neuroblastoma cell lines, CD34 mRNA expression could be detected and corresponded always with the protein surface expression. Alternatively, when CD34 mRNA expression was not seen, CD34 antigen expression ranged from neg. to as high as 78%. Based on these results caution should be taken with transplants obtained by CD34+ stem cell selection from neuroblastoma patients.
RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 9 OF 13 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
AN 97106932 EMBASE
DN 1997106932
TI The broad spectrum of cytokine gene expression by myoid cells from the human marrow microenvironment.
AU Sensebe L.; Deschaseaux M.; Li J.; Herve P.; Charbord P.
CS Dr. P. Charbord, Transfusion Sanguine Etablissement, 1, Boulevard A. Fleming, 25020 Besancon, France
SO Stem Cells, (1997) 15/2 (133-143).
Refs: 57
ISSN: 1066-5099 CODEN: STCEEJ
CY United States
DT Journal; Article
FS 021 Developmental Biology and Teratology
025 Hematology
LA English
SL English
AB Nontransformed stromal colony-derived cell lines (CDCLs) consist of a pure stromal cell population that differentiates following a vascular smooth muscle cell repertoire, and whose in vivo counterpart is that of myoid cells found in adult and fetal human bone marrow cords. We studied the cytokine expression by reverse-transcriptase polymerase chain reaction (RT-PCR) from pooled fast-growing clones from 10 different bone marrow samples. RT-PCR indicated that 30 cytokines (out of 42 studied) were expressed by CDCLs (20 after medium renewal and hydrocortisone renewal, three after addition of interleukin l.beta. (IL-1.beta.) and seven in only part of the CDCL layers examined). The cytokines expressed comprised mediators known to be involved in the maintenance of early and late hematopoiesis (IL-1.alpha. and IL-.beta., IL-6, IL-7, IL-8, IL-11 and IL-13; colony-stimulating factors, thrombopoietin, erythropoietin, stem cell factor, flt 3-ligand, hepatocyte cell growth factor, tumor necrosis factor .alpha., leukemia inhibitory factor, transfurming growth factors .beta.1 and .beta.3; and macrophage inflammatory protein 1.alpha.), angiogenic factors (fibroblast growth factors 1 and 2, vascular endothelial growth factor) and mediators whose usual target (and source) is the connective tissue-forming cells (platelet-derived growth factor A, epidermal growth factor. transforming growth factors .alpha. and .beta.2, oncostatin M and insulin-like ***growth*** factor 1), or ***neuronal*** cells (nerve ***growth*** factor). The cytokines not expressed were lymphokines (IL-2, IL-3, IL-4, IL-5, IL-9, IL- 10, and IL-12 and interferon .gamma.) or mediators synthesized by macrophages (inhibin, activin, platelet-derived growth factor B, and IL-1 receptor antagonist). This study complements the description of the phenotype of the myoid cells, confirming that these cells are the marrow connective tissue- forming cells: moreover, this work suggests that stromal control of hematopoiesis is multifactorial and that myoid cells are involved in the control of marrow angiogenesis and innervation.

L7 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 1996:526770 CAPLUS
DN 125:186636
TI Nerve growth factor is involved in the supportive effect by bone marrow-derived stromal cells of the factor-dependent human cell line UT-7
AU Auffray, Isabelle; Chevalier, Sylvie; Froger, Josy; Izac, Brigitte;

Vainchenker, William; Gascan, Hughes; Coulombel, Laure
CS Inst. Gustave Roussy, Villejuif, Fr.
SO Blood (1996), 88(5), 1608-1618
CODEN: BLOOAW; ISSN: 0006-4971
PB Saunders
DT Journal
LA English
AB We previously demonstrated that murine MS-5 and SI/SI4 cell lines induce the proliferation of human factor-dependent UT-7 cells in the absence of normally required human cytokines and also stimulate the differentiation of CD34+/CD38-LTC-ICs. We report in this study that the effect of MS-5 cells on UT-7 cells can be completely explained by the synergistic action of nerve growth factor (NGF) and stem cell factor (SCF) produced by these murine stromal cells. Purified murine NGF was able to support short-term clone formation and long-term growth of UT-7 cells in suspension cultures as efficiently as rhu-granulocyte-macrophage colony-stimulating factor. NGF action was mediated through the TrkA receptor, in which mRNA was easily detected in UT-7 cells by Northern blot. MS-5 cells strongly expressed NGF-mRNA in Northern blot and direct implication of MS-5 derived NGF in the induction of UT-7 cells proliferation was demonstrated in inhibition assays with an anti-NGF monoclonal antibody (MoAb) that neutralized by 84% UT-7 clone formation. However, NGF did not act alone, and several arguments demonstrated the synergistic action of MS-5-derived SCF: (1) an anti-c-kit partially inhibited UT-7 cells clone formation in coculture assays, (2) SCF and NGF synergized in an H3-TdR incorporation assay, and (3) the stimulatory effect of 10x-concd. MS-5 supernatant was completely inhibited by an anti-c-kit but not by an anti-NGF, and levels of sol. NGF (1.2 ng/mL) detected by ELISA in 10.times. supernatant of MS-5 cells cultures were below the biol. active concns. In contrast, although MS-5 cells also promoted the differentiation of very primitive CD34+/CD38- human stem cells both in colony assays and long-term cultures, we could not incriminate MS-5-derived NGF in the obsd. effect: an anti-NGF MoAb did not inhibit the synergistic effect of MS-5 cells in colony assays or long-term cultures nor did sol. muNGF duplicate MS-5 effect and survival of CD34+/CD38- clonogenic progenitor cells promoted by MS-5 was unaffected by an anti-NGF and was not induced by sol. NGF alone or combined with SCF. In contrast, NGF in synergy with SCF-supported the short-term maintenance of high nos. of CD34+/CD38+ mature erythroid progenitors probably through an indirect mechanism implying macrophages. These results suggest that NGF, in which the primary target cells are outside the hematopoietic system, is present in the marrow environment and might act at some steps of ***hematopoietic*** ***stem*** ***cell*** development. These results also underline that the response of cell lines and normal stem cells to stromal cells is mediated by different pathways.

L7 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 1996:10490 CAPLUS
DN 124:53420
TI Interleukin-6 signal transducer gp130 has specific binding sites for different cytokines as determined by antagonistic and agonistic anti-gp130 monoclonal antibodies
AU Wijdenes, John; Heinrich, Peter C.; Mueller-Newen, Gerhard; Roche, Catherine; Gu, Zong-Jiang; Clement, Claude; Klein, Bernard
CS Diaclone, Besancon, Fr.
SO European Journal of Immunology (1995), 25(12), 3474-81
CODEN: EJIMAF; ISSN: 0014-2980
PB VCH
DT Journal
LA English
AB The cytokines interleukin (IL)-6, IL-11, ciliary neurotrophic factor (CNTF), leukemia inhibitor factor (LIF), oncostatin M (OSM) and probably the recently cloned cytokine cardiotrophin-1, signal, in combination with their specific receptors, through the common signal transducer gp130. Here, we report that the signaling activities of IL-6, IL-11, CNTF and OSM/LIF can be specifically blocked by different anti-gp130 monoclonal antibodies (mAb). Furthermore, we found two mAb, B-P8 and B-S12, which directly activate gp130 independently of the presence of cytokines or their receptors. This agonistic activity includes induction of cytokine-dependent cell proliferation and stimulation of acute-phase protein synthesis in liver cells. Compared to B-P8 mAb, the B-S12 mAb exhibited the strongest agonistic activity, while both mAb are synergistic in their action. This activity could not be blocked by inhibiting mAb against IL-6 and the IL-6 receptor. In contrast to F(ab')2 of B-S12 which still could activate gp130, Fab fragments completely lost their agonistic activity. Activation by tyrosine phosphorylation of the transcription factors Stat1 and APRF/Stat3 was also induced by B-S12 and B-P8, suggesting that both mAb induce homodimerization of gp130. Since ***hematopoietic*** ***stem*** ***cells*** express gp130 on their plasma membrane, it was anticipated that the agonistic anti-gp130 mAb could stimulate the proliferation of these stem cells. Indeed, B-S12 and B-P8 were able to stimulate CD34+ cells. Our data show for the first time that mAb against gp130 can specifically block the action of distinct IL-6-type cytokines that signal through gp130. Such mAb might be of great value for therapeutic applications in diseases where a single cytokine action needs to be inhibited. In addn., the agonistic gp130 mAb may be used as growth factors for maintenance and expansion of stem cells prior to grafting.

L7 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2003 ACS
AN 1995:957296 CAPLUS
DN 124:6796
TI Designer cytokines: targeting actions to cells of choice
AU Economides, Aris N.; Ravetch, Jeffrey V.; Yancopoulos, George D.; Stahl, Neil
CS Regeneron Pharmaceuticals, Tarrytown, NY, 10591, USA
SO Science (Washington, D. C.) (1995), 270(5240), 1351-3
CODEN: SCIEAS; ISSN: 0036-8075
PB American Association for the Advancement of Science
DT Journal
LA English
AB Some growth factors are therapeutically useful partly because restricted expression of their receptors limits their action to particular cell types. However, no unique stimulatory factor is known for many clin. relevant cell types, such as CD34+ ***hematopoietic*** ***stem*** ***cells*** . Here, sol. .alpha. receptor (R.alpha.) components for interleukin-6 (IL-6) and ciliary neurotrophic factor (CNTF) were targeted in an active form to cells expressing surface markers such as CD34 and CD45, thereby rendering those cells responsive to IL-6 or CNTF. The targeting of R.alpha. components may provide the means to create "designer" cytokines that activate a desired cell type expressing a specific cell surface marker.

L7 ANSWER 13 OF 13 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 1995:425918 BIOSIS
DN PREV199598440218
TI ***Hematopoietic*** ***stem*** ***cell*** factor as a modulator of microglia activity.
AU Zhang, Su-Chun; Fedoroff, Sergey
CS Dep. Anat., Unov. Saskatchewan, Saskatoon, SK S7N 5E5 Canada
SO Society for Neuroscience Abstracts, (1995) Vol. 21, No. 1-3, pp. 36. Meeting Info.: 25th Annual Meeting of the Society for Neuroscience San Diego, California, USA November 11-16, 1995
ISSN: 0190-5295.
DT Conference
LA English

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---Logging off of STN---

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| FULL ESTIMATED COST | 0.15 | 0.15 |

FILE 'MEDLINE' ENTERED AT 09:16:50 ON 04 JAN 2002

FILE 'EMBASE' ENTERED AT 09:16:50 ON 04 JAN 2002


FILE 'BIOSIS' ENTERED AT 09:16:50 ON 04 JAN 2002


=> S (haematopoietic stem cell?) and (central nervous system)
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L1 18 (HAEMATOPOIETIC STEM CELL?) AND (CENTRAL NERVOUS SYSTEM)

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DUPLICATE PREFERENCE IS 'MEDLINE, EMBASE, BIOSIS'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
PROCESSING COMPLETED FOR L1
L2 8 DUPLICATE REMOVE L1 (10 DUPLICATES REMOVED)

=> Display L2 IBIB ABS TOTAL

L2 ANSWER 1 OF 8 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2000166941 MEDLINE
DOCUMENT NUMBER: 20166941 PubMed ID: 10700436
TITLE: Autologous stem cell transplantation in a case of treatment resistant **central nervous system** lupus.
AUTHOR: Trysberg E; Lindgren I; Tarkowski A
CORPORATE SOURCE: Department of Rheumatology, University of Goteborg, Guldhedsgatan 10, S-413 46 Goteborg, Sweden.
SOURCE: ANNALS OF THE RHEUMATIC DISEASES, (2000 Mar) 59 (3) 236-8. Journal code: 62W; 0372355. ISSN: 0003-4967.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200004
ENTRY DATE: Entered STN: 20000427
Last Updated on STN: 20000427
Entered Medline: 20000420

AB This case report describes a young woman with systemic lupus erythematosus starting at 16 years of age and giving rise to severe neurological complications including bilateral opticus neuritis and transverse myelitis. Despite heavy immunosuppression her condition steadily aggravated. At this point it was decided to perform autologous stem cell transplantation. **Haematopoietic stem cells** were mobilised with cyclophosphamide and granulocyte colony stimulating factor. Enrichment of CD34(+)cells was followed by depletion of peripheral T and B cells. The post-transplantation course was uneventful, and all the

neurological deficits improved promptly during the 15 months of follow up. This is the first description of successful autologous stem cell transplantation in a case of life threatening **central nervous system** lupus.

L2 ANSWER 2 OF 8 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2000114808 MEDLINE
DOCUMENT NUMBER: 20114808 PubMed ID: 10651386
TITLE: Chemotherapy for retinoblastoma: a current topic.
AUTHOR: Finger P T; Czechonska G; Demirci H; Rausen A
CORPORATE SOURCE: Department of Ophthalmology, The New York Eye and Ear Infirmary, New York City, USA. www.eyecancer.com.
SOURCE: DRUGS, (1999 Dec) 58 (6) 983-96. Ref: 111
Journal code: EC2; 7600076. ISSN: 0012-6667.
PUB. COUNTRY: New Zealand
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 20000229
Last Updated on STN: 20000229
Entered Medline: 20000217

AB Retinoblastoma is the most common primary intraocular tumour in children, with an incidence of 1 in 15,000 live births. Treatment strategies for retinoblastoma have gradually evolved over the past few decades. There has been a trend away from enucleation (removal of the eye) and external beam radiation therapy toward focal 'conservative' treatments. Every effort has been made to save the child's life with preservation of eye and sight, if possible. Primary enucleation continues to be the commonly used method of treatment for retinoblastoma. It is employed in situations where eyes contain large tumours, long standing retinal detachments, neovascular glaucoma and suspicion of optic nerve invasion or extrascleral extension. Most of these eyes either have or are expected to have no useful vision. Radiation therapy continues to be an effective treatment option for retinoblastoma. However, external beam radiotherapy has unfortunately been associated with secondary non-ocular cancers in the field of radiation (primarily in children carrying the RB-1 germline mutation). Ophthalmic plaque brachytherapy has a more focal and shielded radiation field, and may carry less risk. Unfortunately, its applicability is limited to small to medium-sized retinoblastomas in accessible locations. Cryotherapy and transpupillary thermotherapy (TTT) have been used to provide control of selected small tumours. TTT is an advanced laser system adapted to the indirect ophthalmoscope which provides flexible nonsurgical treatment for small retinoblastomas. Recent research in the treatment of retinoblastoma has concentrated on methods of combining chemotherapy with other local treatment modalities (TTT, radiotherapy, cryotherapy). This approach combines the principle of chemotherapeutic debulking in paediatric oncology with conservative focal therapies in ophthalmology. Termed chemoreduction, intravenous or subconjunctival chemotherapy is used to debulk the initial tumour volume and allow for local treatment with TTT, cryotherapy and plaque radiotherapy. Cyclosporin has been added to the chemotherapy regimen in several centres. Other clinical settings where chemotherapy is considered are situations where the histopathology suggests a high risk for metastatic disease and where there is extraocular extension. There is no consensus that chemotherapy is needed when choroidal invasion is observed on histopathology. However, in patients where the retinoblastoma is noted beyond the cut end of the optic nerve or if there is disruption of the sclera with microscopic invasion of the orbital tissue, treatment has been helpful. Systemic and intrathecal chemotherapy with local and cranial radiotherapy has improved the survival

of these patients. Most recently, the use of new chemotherapy modalities with **haematopoietic stem cell** rescue or local radiotherapy has increased the survival of patients with distant metastasis. Nevertheless, the prognosis of patients with **central nervous system** involvement is still poor.

L2 ANSWER 3 OF 8 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 1998397583 MEDLINE
DOCUMENT NUMBER: 98397583 PubMed ID: 9728337
TITLE: Murine mucopolysaccharidosis type VII: the impact of therapies on the clinical course and pathology in a murine model of lysosomal storage disease.
AUTHOR: Vogler C; Sands M S; Galvin N; Levy B; Thorpe C; Barker J; Sly W S
CORPORATE SOURCE: Department of Pathology, Saint Louis University School of Medicine, Missouri, USA.
CONTRACT NUMBER: DK41082 (NIDDK)
DK49525 (NIDDK)
GM31482 (NIGMS)
+
SOURCE: JOURNAL OF INHERITED METABOLIC DISEASE, (1998 Aug) 21 (5) 575-86. Ref: 41
Journal code: KY8; 7910918. ISSN: 0141-8955.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199812
ENTRY DATE: Entered STN: 19990115
Last Updated on STN: 19990115
Entered Medline: 19981203

AB Murine mucopolysaccharidosis type VII (MPS VII) is a lysosomal storage disease caused by a recessively inherited deficiency of the lysosomal enzyme beta-glucuronidase. Affected mice have clinical, biochemical and pathological findings similar to those seen in humans with MPS VII (Sly syndrome), including growth retardation, facial dysmorphism, deafness, behavioural deficits and widespread glycosaminoglycan storage in lysosomes in the viscera, skeleton and brain. This mouse model is a useful tool for the evaluation of the effectiveness and experimental therapies for the MPS disorders. Syngeneic bone marrow transplantation performed in newborn MPS VII animals--before clinical evidence of disease is pronounced--prolongs life, improves hearing and bone growth, and prevents lysosomal storage in many sites, but does not correct the **central nervous system** disease. Enzyme therapy with beta-glucuronidase from the first days of life does reduce lysosomal storage in the brain in murine MPS VII. The enzyme-replaced mice also have reduced visceral lysosomal storage, impressive normalization of their phenotype and an improved life span. The effectiveness of gene therapy for the treatment of lysosomal storage disease has also been tested using the MPS VII model. When transplanted into MPS VII mice, syngeneic **haematopoietic stem cells** or mouse skin fibroblasts infected with retrovirus expressing beta-glucuronidase decreased storage, but only in the liver and spleen. Injection of an adenovirus vector expressing beta-glucuronidase into the vitreous of the MPS VII mice reduced storage in the retinal pigment epithelium and corneal endothelium. Intravenous administration of the adenovirus vector transduced with the beta-glucuronidase gene reduced liver and spleen storage and, when instilled into the cerebral ventricles, this viral vector caused beta-glucuronidase production in epithelial cells lining the ventricles. Recently, retroviral vector-corrected MPS VII fibroblasts secreting high

levels of beta-glucuronidase were engrafted directly into the brains of adult MPS VII mice with resultant reduction in storage in neurons and glia adjacent to the grafts. Future efforts aimed at prolonging expression of the beta-glucuronidase gene by viral vectors and more precisely directing the therapeutic effect to the skeleton and brain will be important in optimizing treatments for murine MPS VII and extending the results of such therapies to humans with MPS.

L2 ANSWER 4 OF 8 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 1998279239 MEDLINE
DOCUMENT NUMBER: 98279239 PubMed ID: 9616283
TITLE: High-dose chemotherapy with carboplatin, etoposide and cyclophosphamide followed by a **haematopoietic stem cell** rescue in patients with high-risk retinoblastoma: a SFOP and SFGM study.
AUTHOR: Namouni F; Doz F; Tanguy M L; Quintana E; Michon J; Pacquement H; Bouffet E; Gentet J C; Plantaz D; Lutz P; Vannier J P; Validire P; Neuenschwander S; Desjardins L; Zucker J M
CORPORATE SOURCE: Paediatric Oncology Unit, Institut Curie, Paris, France.
SOURCE: EUROPEAN JOURNAL OF CANCER, (1997 Dec) 33 (14) 2368-75. Journal code: ARV; 9005373. ISSN: 0959-8049.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199806
ENTRY DATE: Entered STN: 19980625
Last Updated on STN: 19980625
Entered Medline: 19980616

AB This study investigates the role of high-dose chemotherapy with **haematopoietic stem cell** rescue as consolidation treatment in high-risk retinoblastoma (extraocular disease at diagnosis or relapse or invasion of cut end of optic nerve). 25 patients received high-dose chemotherapy including carboplatin (250 mg/m2/day from day 1 to day 5 for the 6 first patients and 350 mg/m2/day from day 1 to day 5 for the other patients), etoposide (350 mg/m2/day from day 1 to day 5) and cyclophosphamide (1.6 g/m2/day from day 2 to day 5) (CARBOPEC) followed by autologous **haematopoietic stem cell** rescue. 19 patients received this drug combination for chemosensitive extraocular relapse. The other 6 patients with histological high-risk factors were given this treatment as consolidation after enucleation and conventional chemotherapy. The three year disease-free survival was 67.1%. In 7 of the 9 relapsing patients, the first site of relapse was the **central nervous system**. All patients with **central nervous system** disease died except one. The main toxicity was haematological and digestive (mucositis and diarrhoea). 2 of the 13 evaluable patients had grade III and IV ototoxicity. One patient experienced an acute grade I reversible cardiotoxicity. The CARBOPEC regimen seems to be a promising therapeutic strategy in patients with high-risk retinoblastoma, especially those with bone and/or bone marrow involvement. This treatment did not improve the outcome of patients with **central nervous system** disease.

L2 ANSWER 5 OF 8 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 97413208 MEDLINE
DOCUMENT NUMBER: 97413208 PubMed ID: 9267851
TITLE: Canine fucosidosis: a model for retroviral gene transfer into **haematopoietic stem cells**
.
AUTHOR: Ferrara M L; Occhiodoro T; Fuller M; Hawthorne W J; Teutsch

S; Tucker V E; Hopwood J J; Stewart G J; Anson D S
CORPORATE SOURCE: Department of Clinical Immunology, Westmead Hospital, NSW, Australia.
SOURCE: NEUROMUSCULAR DISORDERS, (1997 Jul) 7 (5) 361-6.
Journal code: BJS; 9111470. ISSN: 0960-8966.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199710
ENTRY DATE: Entered STN: 19971021
Last Updated on STN: 19971021
Entered Medline: 19971009

AB Severe progressive fatal neurological degeneration occurs in fucosidosis, a storage disease. Bone marrow transplantation into affected dogs has shown that **haematopoietic stem cells** can provide enzyme producing daughter cells to the **central nervous system**, altering disease course. This makes canine fucosidosis an ideal large animal model for gene therapy. Fucosidosis affected allogeneic or autologous canine marrow was transduced ex vivo by cocultivation, then transplanted into fucosidosis affected dogs conditioned with total lymphoid irradiation. The vectors were Moloney murine leukaemia virus based. Transduction efficiency was increased with multiple cytokines in short term marrow culture. Despite high levels of transduction, proviral sequence was detected 2 months post transplant in only one dog. Early or total graft failure occurred in all transplants. We believe lack of engraftment could be caused by differentiation or change of repopulating ability of marrow cells occurring with multiple cytokine mixes in culture media.

L2 ANSWER 6 OF 8 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 96025638 EMBASE
DOCUMENT NUMBER: 1996025638
TITLE: [Role of autografts in severe or metastatic breast cancer]. LA PLACE DE L'AUTOGREFFE DANS LES CANCERS DU SEIN GRAVES OU METASTATIQUES.
AUTHOR: Gisselbrecht C.; Extra J.M.; Loz J.P.; Devaux Y.; Peny A.M.; Guillevin L.; Bremond D.; Janvier M.; Maraninchi D.
CORPORATE SOURCE: Hopital Saint-Louis, Institut d'Hematologie, 1 Av. Claude-Vellefaux,F-75010 Paris, France
SOURCE: Chirurgie - Memoires de l'Academie de Chirurgie, (1994) 120/6-7 (357-359).
ISSN: 0001-4001 CODEN: CGMABP
COUNTRY: France
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 009 Surgery
016 Cancer
037 Drug Literature Index
LANGUAGE: French
SUMMARY LANGUAGE: French; English

AB Intensive treatment of poor prognosis breast cancer has included bone marrow autografts. A multicentric study was conducted from 1988 to 1992, including 105 patients with a minimal follow-up of 2 years after the autograft. Inclusion criteria were: age < 55 years, measurable metastasis, inflammatory breast cancer, breast cancer with major lymph node invasion (> 8 N+). Chemotherapy (6 to 8 cycles) was used initially. In responders, bone marrow was harvested and frozen. Medullary invasion had to be absent for bone marrow harvesting. Management then included cyclophosphamide: 60 mg/kg, D-7, D-6; mitoxantrone. 12 mg/m2, D-9 to D-5; alkeran: 140 mg/m2, D-2 followed D0 for bone marrow autograft. For the 105 patients, mean age was 40 years; inflammatory breast cancer. 33 patients; .gtoreq. 8 N+: 11 patients; metastasis: 61 patients. For the cases with metastasis, the main

sites were: liver: 24 patients, lung: 14 patients, bone: 22 patients, **central nervous system**: 4 patients. Nineteen patients had at least two metastasic localizations. Responders alone were included although 7 patients had been stabilized before the autograft. For the metastatic forms, median survival was 41 .+-. 9 months from the onset to diagnosis of metastasis, with 8 patients surviving over 5 years. Median survival without progression was 12 months with a 4-year probability of 17%. For inflammatory breast cancers, the probability of survival was 50% and survival without progression was 42%. For patients with lymph node invasion .gtoreq. 8 N+, it was 72%. Survival in the metastatic forms was compared with a series of responding patients managed with chemotherapy during the same period. Median survival was 24 months but reached 38 months for 53 patients with complete or major remission. These results were sufficiently promising to propose a randomized study comparing chemotherapy to management combining autograft or **haematopoietic stem cells** collected by cytapheresis. These studies aimed at evaluating three categories of patients are organized by the National Federation of the Anticancer center and the French Society for Bone Graft.

L2 ANSWER 7 OF 8 MEDLINE DUPLICATE 6
ACCESSION NUMBER: 93218720 MEDLINE
DOCUMENT NUMBER: 93218720 PubMed ID: 8464477
TITLE: Repair of demyelinated lesions by transplantation of purified O-2A progenitor cells.
COMMENT: Comment in: Nature. 1993 Apr 1;362(6419):414-5
AUTHOR: Groves A K; Barnett S C; Franklin R J; Crang A J; Mayer M; Blakemore W F; Noble M
CORPORATE SOURCE: Cellular Neurobiology Laboratory, Ludwig Institute for Cancer Research, London, UK.
SOURCE: NATURE, (1993 Apr 1) 362 (6419) 453-5.
Journal code: NSC; 0410462. ISSN: 0028-0836.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199304
ENTRY DATE: Entered STN: 19930521
Last Updated on STN: 19930521
Entered Medline: 19930430

AB The transplantation of well defined populations of precursor cells offers a means of repairing damaged tissue and of delivering therapeutic compounds to sites of injury or degeneration. For example, a functional immune system can be reconstituted by transplantation of purified **haematopoietic stem cells**, and transplanted skeletal myoblasts and keratinocytes can participate in the formation of normal tissue in host animals. Cell transplantation in the **central nervous system** (CNS) has been proposed as a means of correcting neuronal dysfunction in diseases associated with neuronal loss; it might also rectify glial cell dysfunction, with transplanted oligodendrocyte precursor cells eventually allowing repair of demyelinating damage in the CNS. Here we use co-operating growth factors to expand purified populations of oligodendrocyte type-2 astrocyte (O-2A) progenitor cells for several weeks in vitro. When injected into demyelinating lesions in spinal cords of adult rats, created in such a way as to preclude host-mediated remyelination, these expanded populations are capable of producing extensive remyelination. In addition, transplantation of O-2A progenitor cells genetically modified to express the bacterial beta-galactosidase gene gives rise to beta-galactosidase-positive oligodendrocytes which remyelinate demyelinated axons within the lesion. These results offer a viable strategy for the manipulation of neural precursor cells which is compatible with attempts to repair damaged CNS

tissue by precursor transplantation.

L2 ANSWER 8 OF 8 BIOSIS COPYRIGHT 2002 BIOSIS
ACCESSION NUMBER: 1993:385784 BIOSIS
DOCUMENT NUMBER: PREV199396061084
TITLE: An early pre-liver intraembryonic source of CFU-S in the developing mouse.
AUTHOR(S): Medvinsky, Alexander L. (1); Samoylina, Nina L. (1); Muller, Albrecht M.; Dzierzak, Elaine A.
CORPORATE SOURCE: (1) Lab. Physiol. Hematopoiesis, National Res. Cent. Hematol., Novozykovsky pr. 4a, 125167 Moscow Russia
SOURCE: Nature (London), (1993) Vol. 364, No. 6432, pp. 64-67. ISSN: 0028-0836.
DOCUMENT TYPE: Article
LANGUAGE: English

AB It is widely accepted that during murine embryogenesis, totipotent **haematopoietic stem cells** first originate in the yolk sac, then migrate to the fetal liver and finally colonize the bone marrow shortly before birth-1,2. This view is based on in vitro studies showing that yolk sac cells can differentiate into various haematopoietic lineages-1,3-7 and in vivo studies showing that yolk sac contains spleen colony-forming units (CFU-S) beginning at day 8 of gestation-1. However, some investigators have failed to find statistically significant numbers of CFU-S arising from day 9 yolk sac-3,8-11 and, although one group reported that yolk sac could repopulate the haematopoietic system of W mutant mice-2, others have failed to confirm yolk sac-derived repopulation of adults-3,12. In the avian and amphibian systems, the yolk sac gives rise only to early, transitory haematopoiesis whereas the definitive adult **haematopoietic stem cells** in these vertebrates are derived from the mesodermal region containing the dorsal aorta-13-17. Because this analogous area of the mouse embryo has not been previously examined for haematopoietic activity, we directly compared the CFU-S activity of the aorta, gonad, mesonephros (AGM) region with the yolk sac and fetal liver during embryogenesis. Here we report that this intra-embryonic AGM region contains CFU-S activity at a higher frequency than that in embryonic yolk sac and that such activity appears to the AGM region before the fetal liver.

stem cell

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